

To: Interested Stakeholders

From: Bennett Brooks and Eric Poncelet, CONCUR

Date: March 31, 2003

Re: CALFED Water Use Efficiency Program Staff Work Group on Urban Water Use Measurement -- Compilation of Background Information California Legal Authorities Governing Water Use Measurement

The attached memo was created to inform the deliberations of the CALFED Water Use Efficiency Program Staff Work Group on Urban Water Use Measurement. The memo contains background information describing legal authorities governing urban water use measurement in California. It was drafted by Lee Axelrad of Resources Law Group.

Note: This information has not been confirmed by CALFED advisory and decision-making bodies. It is intended solely to foster informal stakeholder discussions and elicit preliminary feedback. Anyone using this information beyond the Staff Work Group is asked to appropriately characterize the nature of this material.

ATTACHMENT 5

To: CALFED WUE Staff Work Group on Urban Water Use Measurement

From: Eric Poncelet and Bennett Brooks, CONCUR

Date: March 12, 2003

Re: Compilation of Background Information on California Legal Authorities Governing Water Use Measurement

Attached is a background document, drafted by Lee Axelrad of Resources Law Group, describing legal authorities governing water use measurement in California.

This document — coupled with the accompanying companion piece on current urban water use measurement practices, costs, and benefits (see **Attachment 4**) — represents CALFED WUE Program Staff's view of the most important, readily accessible background information to support Staff Work Group deliberations on the issue of urban water use measurement. Moreover, all of this information was identified as relevant by stakeholders in the Stakeholder Assessment conducted last summer. CALFED staff will work to provide additional background information as deemed necessary by the staff work group.

The attached document includes both a four-page Executive Summary, as well as more detailed background information. Overarching findings include:

- Legal authorities governing water use measurement in California come in the form not of a single coherent document but in many pieces owing to the state's extensive and diverse history of water law and rights.
- Legal authorities guiding measurement use a variety of instruments. Some measurement requirements are stipulated through regulation, such as the California Public Utilities Commission's authority. Others, such as the Bureau of Reclamation, are carried out through contractual/proprietor arrangements.

Please note: This document contains information pertaining to both urban and agricultural water use measurement. The first half of these materials – pages 1 through 28 – are directly relevant to urban water use measurement. (Some of these earlier materials also apply to agricultural water use measurement.) The remainder of these background materials focus on agricultural water use measurement only.

The material has been arranged as it has largely because certain topics presume prior understanding of other topics (e.g., the "water forum agreement" incorporates by reference the "urban MOU").

Executive Summary

Water Use Measurement – California Legal Authorities

Policy Of The American Water Works Association

- Recommends that every water utility meter all water taken into its system and all water distributed from its system to its users.

The California Water Use Measurement Law

- Legislature finds and declares that it is necessary to determine the quantities of water in use throughout the state to the maximum extent that is reasonable to do so, and that unmeasured water use causes waste and unreasonable use which should be identified, isolated, and eliminated.
- Sets state goal of installing meters on all new water service connections after January 1, 1992.
- Requires that domestic cold water meters comply with AWWA standards and be approved by State Director of Food and Agriculture.

Water Code Section 110

- Requires metering of all new potable water service starting January 1, 1992.

Authorities of the County Sealers of Weights and Measures

- Shall inspect, try and test all instruments for measurements used by any proprietor, agent, lessee or employee for commercial purposes.

Authorities of California Department of Food and Agriculture

- Division of Measurement Standards has general supervision of the weights and measures and weighing and measuring devices sold or used in the state.
- Adopts by regulation the latest standards of the National Conference on Weights and Measures, National Institute of Standards and Technology Handbook 44, including those applicable to devices for the measurement of water.

Authorities of the California Public Utilities Commission

- Regulates privately-owned utilities and some municipally-owned utilities.
- By statute, Legislature has defined “public utility” to include certain water corporations.
- CPUC jurisdiction only extends to public utilities where utility property has been dedicated to public use.

- Where CPUC has jurisdiction, it has very broad powers to supervise and regulate, and “may do all things . . . necessary and convenient in the exercise of such power and jurisdiction.”
- Under the California Constitution, “A city, county, or other public body may not regulate matters over which the Legislature grants regulatory power to the Commission.”
- Where CPUC has jurisdiction, it specifically may impose water measurement standards.
- CPUC General Order 103 sets minimum standards for water meters applicable to CPUC-regulated water corporations, requires measurement of water production, and requires volumetric sales except that flat rate or estimated service is allowed for temporary service, fire protection service, street and sewer service, or if authorization is first obtained from the CPUC.

Urban Water Management Planning

- Urban water suppliers shall adopt a water management plan, including descriptions of past and projected water use.
- DWR considers plan adoption and implementation when evaluating grant and loan applications.

Memorandum of Understanding Regarding Efficient Water Management Practices for Agricultural Water Suppliers in California

- MOU signatories become members of Agricultural Water Management Council, and plan and implement cost-effective efficient water management practices, including water use measurement.

Memorandum of Understanding Regarding Urban Water Conservation in California

- MOU signatories become members of California Urban Water Conservation Council and undertake a good faith effort to implement best management practices, including metering of all connections and volumetric billing.

Bureau of Reclamation Contracts

- All Central Valley Project water service or repayment contracts shall ensure that all surface water delivery systems are equipped with water measuring devices or methods acceptable to the Secretary.
- Districts with certain types of Bureau contracts are required to submit water management plans, describing measurement devices and implementing BMPs deemed critical, including measuring agricultural deliveries to within a specified degree of accuracy and metering all new and existing urban connections.

Water Forum Agreement

- MOU signatories in Sacramento region agree to implement certain actions, including CUWCC water conservation plans and BMPs, and specifically including residential retrofit of unmetered connections and conservation pricing.

Authorities of Both State Water Resources Control Board and Department of Water Resources

- DWR and SWRCB “shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. . . .”

Authorities of the California Department of Water Resources

- DWR may investigate water use, and is authorized to collect hydrologic data.
- DWR or any other public agency that supplies water for agricultural use may institute a water conservation program, including using, providing to farmers, or assisting farmers in the use of flow measuring devices.
- DWR shall update California Water Plan (Bulletin 160) every five years, and in doing so must release a preliminary draft that identifies assumptions and estimates relating to current and projected water use for urban and open space uses.

Authorities of the State Water Resources Control Board

- Holders of riparian and pre-1914 appropriative rights must submit statements of water diversion and use every three years, indicating quantity of water used.
- Holders of permits for surface diversion or storage or underground storage may be required to establish suitable measuring and recording devices.
- After issuance of permits, a permittee must submit progress reports each year. After perfection of water right, a licensee must submit progress reports every three years specifying the amount of water taken.
- Persons extracting more than 25 acre-feet of groundwater per year in Riverside, San Bernardino, Los Angeles, and Ventura Counties must file a notice of extraction and diversion of water with SWRCB, stating quantity of water taken and method of measurement over preceding ten years, as to both groundwater and surface water taken.

Measurement in Watermaster Service Areas

- Owners of conduits and certain reservoirs within watermaster service areas are required to construct and maintain such flow measuring devices as DWR may require, to assist the watermaster in determining the amounts being diverted and applied to beneficial use.

Groundwater Management Programs under the Groundwater Management Act of 1992 (A.B. 3030), as amended

- Any local agency can adopt a groundwater management plan, and may, after an election, impose fees and assessments based on amounts extracted.

Groundwater Management Districts

- Several distinct statutes create separate groundwater management districts, typically empowering districts to require or engage in measurement of water use.

Transfers and Conjunctive Use

- Before allowing certain kinds of transfers, the SWRCB must review available records and find, among other things, that the change will not injure another user or unreasonably effect fish and wildlife, and, as with CVPIA transfers, must determine further if the water proposed to be transferred would have otherwise been consumptively used.
- In allowing a surplus water transfer involving conserved water, the SWRCB may require the user to file reports describing the amount of reduction of water use due to conservation efforts.
- In allowing pumping in lieu of using surface water, the SWRCB may require the user to file reports describing the amount of reduction of water use due to substitution of an alternate supply.
- Any user of imported or conserved surface water using the water in lieu of groundwater extraction shall file with the SWRCB an annual statement of the amount applied to reasonable beneficial use.

WATER USE MEASUREMENT: CALIFORNIA LEGAL AUTHORITIES¹

Overview

The purpose of this section is to compile and summarize legal authorities pertaining to measurement of water use in California. This area of law is not a single, unified, statutory scheme, simply garnished with a few judicial decisions. Rather, the law affecting water use measurement in California derives from a variety of sources. This summary thus draws from provisions of the California Constitution, federal and state statutes and regulations, court decisions, agency guidance documents, intergovernmental memoranda of understanding and voluntary standards, technical standards issued by industry associations, and other authoritative sources of rules and standards pertaining to water use measurement.

Some pieces of the measurement puzzle are explicitly linked, such as where a state statute incorporates a technical standard promulgated by a private association. Other pieces might seem unrelated, were it not for the fact that they all bear upon the measurement — and therefore the management — of one of California’s most important natural and economic resources.

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¹This is a draft document. All comments and suggestions regarding revisions or additions are welcome.

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Policy of the American Water Works Association

The board of directors of the American Water Works Association² has adopted the following policy statement:

“The American Water Works Association (AWWA) recommends that every water utility meter all water taken into its system and all water distributed from its system to its users. Metering of all water services is an effective means of improving and maintaining the close control of water system operations necessitated by the increasing difficulty in obtaining adequate water supplies and the increasing costs of providing water service to consumers. Charging for water service on the basis of metered consumption provides a means of assessing users equitably for water service. Metering also provides a data base for system performance studies and aids in the evaluation of conservation measures. It improves accountability for water delivered through the system and, therefore,

²“Founded in 1881, AWWA is the largest organization of water supply professionals in the world. Its more than 50,000 members represent the full spectrum of the drinking water community: treatment plant operators and managers, scientists, environmentalists, manufacturers, academicians, regulators, and others who hold genuine interest in water supply and public health. Membership includes more than 4,000 utilities that supply water to roughly 180 million people in North America.” Website of the AWWA <www.awwa.org/about> visited January 13, 2002.

facilitates management decisions. Continual and periodic testing of meters is an essential part of a universal metering program.”³

The California Water Use Measurement Law

California’s “Water Use Measurement Law” is found in California Water Code, division 1, chapter 8, sections 500 through 530. The Water Use Measurement Law was enacted as part of Senate Bill 229 (Boatwright), which was signed into law by the Governor in 1991.

Legislative Findings and Declarations

In enacting the Water Use Measurement Law, the Legislature made the following findings and declarations:

Necessity of Measurement. “[I]t is necessary to determine the quantities of water in use throughout the state to the maximum extent that is reasonable to do so.”⁴

Absence of Measurement Causes Waste and Unreasonable Use of Water. “[W]ater furnished or used without any method of determination of the quantities of water used by the person to whom the water is furnished has caused, and will continue to cause, waste and unreasonable use of water, and . . . this waste and unreasonable use should be identified, isolated, and eliminated.”⁵

Waste and Unreasonable Use of Water Cause Waste of Energy. “[W]aste or unreasonable use of water imposes unnecessary and wasteful consumption of energy to deliver or furnish the water, and it is necessary, therefore, to determine the quantities of water in use throughout the state to the maximum extent that it is reasonable to do so in order to reduce that energy consumption.”⁶

State Goal of Metering All New Water Service Connections Commencing in 1992. “[T]he California goal for measurement of water use is the achievement by January 1, 1992, of the installation of water meters on all new water service connections after that date to systems and facilities owned, operated, or under the management or control of a water purveyor, which meters will measure the quantity of water furnished or delivered through each system or facility to each new user of the water.”⁷ The Legislature gave inclusive definitions to the key terms of this goal statement, not expressly limiting its application to potable water.⁸

³Adopted by the Board of Directors of the AWWA on Jan. 26, 1969, and revised on June 15, 1980, reprinted in American Water Works Association, 1982-83 Officers and Committee Directory, including Policy Statements and Official Documents

⁴Cal. Water Code, § 520.

⁵Cal. Water Code, § 521. Regarding waste and unreasonable use of water, the California Constitution provides:

“It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water. . . .”

Cal. Constitution, Art. X, § 2.

⁶Cal. Water Code, § 522.

⁷Cal. Water Code, § 523.

⁸“‘Water meter’ includes any suitable water measuring device or facility which measures or determines the volumetric flow of water.” Cal. Water Code, § 516. “‘Water service’ means the sale, lease, rental, furnishing, or delivery of water for beneficial use, and includes, but is not limited to, contracting for that sale, lease, rental,

Technical Standards

The Water Use Measurement Law also provides that “[d]omestic cold water meters shall be in compliance with relevant standards of the American Water Works Association and shall be of the type approved by the Director of Food and Agriculture pursuant to Section 12500.5 of the Business and Professions Code.”⁹

Water Code Section 110, Required Metering of New Potable Water Service

In the same bill that enacted the Water Use Measurement Law, the Legislature also enacted a provision to require metering of new water service.¹⁰ In setting forth this metering requirement, the Legislature used the same inclusive definitions it had used in the Water Measurement Law in regard to the metering goal. However, here, the Legislature expressly limited the metering requirement “only to potable water.”¹¹

“Notwithstanding any other provision of law, every water purveyor who sells, leases, rents, furnishes, or delivers water service to any person shall require, as a condition of new water service on and after January 1, 1992, that a suitable water meter to measure the water service shall be installed on the water service facilities in accordance with Chapter 8 (commencing with Section 500). The cost of installation of the meter shall be paid by the user of the water, and any water purveyor may impose and collect charges for those costs.”¹²

Authorities of The County Sealers of Weights and Measures.

State statute establishes “in each county the office of county sealer of weights and measures. The county sealer shall be appointed by the board of supervisors, except in chartered counties where a different method of appointment is prescribed.”¹³

“Each sealer shall, within his or her county inspect, try and test all weights, scales, beams, measures of any kind, instruments or mechanical devices for weighing or measurements, and

furnishing, or delivery of water, except bottled water.” Cal. Water Code, § 515. “‘Water purveyor’ means any person who furnishes water service to another person.” Cal. Water Code, § 512. “‘Person’ means any individual, firm, association, partnership, corporation, or public entity of any kind.” Cal. Water Code, § 513. “‘Public entity’ includes a city, county, city and county, whether general law or chartered, a district, board, commission, bureau, authority, agency, department, division, section, any other political subdivision of the state of any kind, or the state.” Cal. Water Code, § 514.

⁹Cal. Water Code, § 530. “The [Secretary of Food and Agriculture] by rules and regulations shall provide for submission for approval of types or designs of weights, measures, or weighing, measuring, or counting instruments or devices, used for commercial purposes, and shall issue certificates of approval of such types or designs as he shall find to meet the requirements of this code and the tolerances and specifications thereunder. [¶] It shall be unlawful to sell or use for commercial purposes any weight or measure, or any weighing, measuring, or counting instrument or device, of a type or design which has not first been so approved by the department; provided, however, that any such weight, measure, instrument, or device in use for commercial purposes prior to the effective date of this act may be continued in use unless and until condemned under the provisions of this code.” Cal. Bus. & Professions Code, § 12500.5; see also Cal. Bus. & Professions Code, §§ 12500, subds. (b) & (e), 12500.9.

¹⁰Cal. Water Code, § 110.

¹¹Cal. Water Code, § 110, subds. (b) & (c). The Legislature also said that the metering requirement “does not apply to a community water system which serves less than 15 service connections used by yearlong residents or regularly serves less than 25 yearlong residents, or a single well which services the water supply of a single family residential home.” Cal. Water Code, § 110, subd. (d).

¹²Cal. Water Code, § 110, subd. (a).

¹³Cal. Business & Professions Code, § 12200.

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tools, appliances and accessories connected with any or all such instruments or measures, sold, or used by any proprietor, agent, lessee or employee for commercial purposes, as defined in subdivision (e) of Section 12500.”¹⁴

”‘Commercial purposes’ include the determination of the weight, measure, or count of any commodity or thing which is sold on the basis of weight, measure, or count; or the determination of the weight, measure, or count of any commodity or thing upon which determination a charge for service is based. Devices used in a determination upon which a charge for service is based include, but are not limited to, taximeters, odometers, timing devices, parcel scales, shipping scales, and scales used in the payment of agricultural workers. ‘Commercial purposes’ do not include the determination of the weight, measure, or count of any commodity or thing which is performed within a plant or business as a part of the manufacturing, processing, or preparing for market of that commodity or thing, or the determination of charges for the transmission of letters or parcels of less than 150 pounds, except when that determination is made in the presence of the customer charged for the service.”¹⁵

Authorities of the California Department of Food and Agriculture.

“Where not otherwise provided by law, the Department of Food and Agriculture has general supervision of the weights and measures and weighing and measuring devices sold or used in the state.”¹⁶ The Department carries out this duty through its Division of Measurement Standards.

“The [Secretary of Food and Agriculture] by rules and regulations shall provide for submission for approval of types or designs of weights, measures, or weighing, measuring, or counting instruments or devices, used for commercial purposes, and shall issue certificates of approval of such types or designs as he shall find to meet the requirements of this code and the tolerances and specifications thereunder. It shall be unlawful to sell or use for commercial purposes any weight or measure, or any weighing, measuring, or counting instrument or device, of a type or design which has not first been so approved by the department; provided, however, that any such weight, measure, instrument, or device in use for commercial purposes prior to the effective date of this act may be continued in use unless and until condemned under the provisions of this code.”¹⁷

“Notwithstanding Section 12500.5, the [Secretary of Food and Agriculture] may prohibit the sale or installation of any previously approved type or design of weight or measure or weighing, measuring, or counting instrument if the director determines the weight, measure, or instrument does not fulfill the purpose for which it was approved or that the weight, measure, or instrument is not identical to the approved type or design. The director may initiate proceedings pursuant to Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code to determine whether the approval should be revoked or modified, and to determine the period of time that the owner or user of any accurate device for which type approval has been revoked or modified may continue to use that device for commercial purposes, pending the replacement or modification of the device.”¹⁸

“The [Secretary of Food and Agriculture] shall establish tolerances and specifications and other technical requirements for commercial weighing and measuring. In doing so, the

¹⁴Cal. Business & Professions Code, § 12210.

¹⁵Cal. Business & Professions Code, § 12500, subd. (e).

¹⁶Cal. Business & Professions Code, § 12100.

¹⁷Cal. Business & Professions Code, § 12500.5.

¹⁸Cal. Business & Professions Code, § 12500.6.

[Secretary of Food and Agriculture] shall adopt, by reference, the latest standards as recommended by the National Conference on Weights and Measures and published in the National Institute of Standards and Technology Handbook 44 "Specifications and Tolerances, and other Technical Requirements for Weighing and Measuring Devices," except as specifically modified, amended, or rejected by regulation adopted by the [Secretary of Food and Agriculture]. The [Secretary of Food and Agriculture] may, by regulation, establish tolerances and specifications for commercial weighing and measuring devices not included in Handbook 44 . . . It shall be unlawful for any person to violate any of the rules, regulations, tolerances, specifications, or standards established under this section."¹⁹

The detailed technical requirements adopted by the Secretary of Food and Agriculture, incorporating the standards of the National Conference on Weights and Measures, apply "to devices used for the measurement of water; generally applicable to, but not limited to, utilities type meters installed in homes or business establishments and meters installed in batching systems."²⁰

Authorities of the California Public Utilities Commission

Jurisdiction of California Public Utilities Commission

The California Public Utilities Commission (CPUC) has power to regulate only privately-owned utilities, unless an express statutory provision authorizes CPUC jurisdiction over municipally-owned utilities.²¹

The California Constitution directly gives the CPUC power to regulate certain activities (e.g., transportation companies). "Furnishing water to the public," however, is an activity that the Constitution entrusts to the control of the Legislature. "Private corporations and persons that own, operate, control, or manage a . . . system for . . . furnishing . . . water . . . directly or indirectly to or for the public . . . are public utilities subject to control by the Legislature. The Legislature may prescribe that additional classes of private corporations or other persons are public utilities."²² However, the Constitution further provides that "[t]he Legislature has plenary power, unlimited by the other provisions of this constitution but consistent with this article, to confer additional authority and jurisdiction upon the [CPUC]"²³ Thus, the CPUC's power to regulate water corporations as public utilities relies on a legislative grant of authority to the CPUC.

By statute, the Legislature has defined what constitutes a "public utility" subject to CPUC jurisdiction.

- "'Public utility' includes every . . . water corporation^[24] . . . where the service is performed for, or the commodity is delivered to, the public or any portion thereof.
- "Whenever any . . . water corporation . . . performs a service for, or delivers a commodity to, the public or any portion thereof for which any compensation or payment whatsoever

¹⁹Cal. Business & Professions Code, § 12107.

²⁰Division of Measurement Standards, Dept. of Food and Agriculture, Field Reference Manual, § 3.36.A.1; see also Cal. Code Regs., tit. 4, div. 9, § 4002.6. These detailed standards can be found on the Internet at <<http://www.cdffa.ca.gov/dms/regulations.htm>> (visited January 16, 2003).

²¹Witkin, 8 Summary of California Law, 9th Edition, Constitutional Law § 92, p. 436.

²²Cal. Const., art. XII, § 3.

²³Cal. Const., art. XII, § 5.

²⁴The applicable statutory definition of "water corporation" is "every corporation or person owning, controlling, operating, or managing any water system for compensation within this State." Cal. Pub. Utilities Code, § 241.

- is received, that . . . water corporation . . . is a public utility subject to the jurisdiction, control, and regulation of the commission and the provisions of this part.
- “When any person or corporation²⁵ performs any service for, or delivers any commodity to, any person, private corporation, municipality, or other political subdivision of the state, that in turn either directly or indirectly, mediately or immediately, performs that service for, or delivers that commodity to, the public or any portion thereof, that person or corporation is a public utility subject to the jurisdiction, control, and regulation of the commission and the provisions of this part.”²⁶

Additional specific meanings of “public utility” as that term is applied to “water companies” are also defined by statute. Public utilities subject to CPUC jurisdiction, thus, include:

- “Any person, firm, or corporation, their lessees, trustees, receivers or trustees appointed by any court whatsoever, owning, controlling, operating, or managing any water system within this State, who sells, leases, rents, or delivers water to any person, firm, corporation, municipality, or any other political subdivision of the State, whether under contract or otherwise”²⁷
- “Any corporation or association which is organized for the purpose of delivering water solely to its stockholders or members at cost, and which delivers water to others than its stockholders or members, or to the state or any department or agency thereof or any school district, or to any other mutual water company, for compensation”²⁸
- “Any corporation or association which is organized both for the purpose of delivering water to its stockholders or members at cost, and to persons, firms, corporations, municipalities, or other political subdivisions of the state”²⁹

However, by statutory exception to the above, water companies that are *not* subject to CPUC jurisdiction include:

- “Any owner of a water supply not otherwise dedicated to public use and primarily used for domestic or industrial purposes by him or for the irrigation of his lands, who (a) sells or delivers the surplus of such water for domestic or school district purposes or for the irrigation of adjoining lands, or (b) in an emergency water shortage sells or delivers water from such supply to others for a limited period not to exceed one irrigation season, or (c) sells or delivers a portion of such water supply as a matter of accommodation to neighbors to whom no other supply of water for domestic or irrigation purposes is equally available”³⁰

²⁵The applicable statutory definition of “corporation” is “a corporation, a company, an association, and a joint stock association.” Cal. Pub. Utilities Code, § 204. This definition does not include a “municipal corporation.” Order Instituting Investigation on the Commission’s own motion into the rates, charges, and practices of water and sewer utilities providing service to mobilehome parks and multiple unit residential complexes and the circumstances under which those rates and charges can be passed on to the end user, California Public Utilities Commission Decision No. 01-05-058, 209 P.U.R. 4th 497 (May 14, 2001).

²⁶Cal. Pub. Utilities Code, § 216, subds. (a), (b), and (c).

²⁷Cal. Pub. Utilities Code, § 2701.

²⁸Cal. Pub. Utilities Code, § 2702.

²⁹Cal. Pub. Utilities Code, § 2703.

³⁰Cal. Pub. Utilities Code, § 2704.

- “Any corporation or association that is organized for the purposes of delivering water to its stockholders and members at cost, including use of works for conserving, treating, and reclaiming water, and that delivers water to no one except its stockholders or members, or to the state or any agency or department thereof, to any city, county, school district, or other public district, or any federal agency that provides fire protection or operates park facilities, or to any other mutual water company, at cost”³¹
- “Any person or corporation, and their lessees, receivers, or trustees appointed by any court, that maintains a mobilehome park or a multiple unit residential complex and provides, or will provide, water service to users through a submeter service system, . . . if each user of the submeter service system is charged at the rate which would be applicable if the user were receiving the water directly from the water corporation.”³²
- “A mobilehome park that provides water service only to its tenants from water supplies and facilities that it owns, not otherwise dedicated to public service”³³
- Other than mutual water companies, “[a]ny person, firm, or corporation, their lessees, trustees, receivers or trustees appointed by any court, who sells or delivers water exclusively to a water conservation district organized under the laws of the state or who leases or otherwise permits the use of ditches or other water transmission facilities exclusively by the district”³⁴
- Other than mutual water companies, “[a]ny person, firm, or corporation with water that is not being used to supply water to a public water system, or that is not otherwise dedicated to public use, that sells, leases, transfers, or otherwise delivers the water at wholesale to any public agency or to a water corporation providing water utility service.”³⁵
- “[D]uring the time the United States is a party to a war or to a state of war, the owner of any private irrigation plant [delivering] water to others, or any mutual water company [delivering] water to others than its stockholders or members, with or without compensation.”³⁶

In addition to the above statutory requirements for an entity to be considered a public utility subject to CPUC jurisdiction, there is also a requirement, articulated in court cases, that,

³¹Cal. Pub. Utilities Code, § 2705. In addition, “a mutual water company may perform the following acts without becoming a public utility and becoming subject to the jurisdiction, control or regulation of the commission: (a) May deliver water at cost to any lessee of its stock or shares or other evidence of membership where the lease is in writing signed by the owner of the stock or shares or other evidence of membership and the lessee thereof and approved by the mutual water company. (b) May deliver water at cost to any land leased by a stockholder, shareholder, or member of the mutual water company to a person not a stockholder, shareholder or member thereof, provided the lease is in writing signed by the stockholder, shareholder or member and the lessee of the land and approved by the mutual water company. (c) May transfer water or water rights to, or exchange water or water rights with, another entity pursuant to state or federal law, or both. (d) In a bona fide water emergency, but for no longer than the existence of the emergency, may deliver water at cost to any person owning or leasing real property located within or adjacent to the service area of the mutual water company, provided that the water is delivered pursuant to a written contract signed by the mutual water company and the person to whom the water is delivered. (e) May deliver water pursuant to any contract for water service made: (1) In settlement of litigation involving disputed water rights or any judgment in the litigation. (2) In consideration of the conveyance of a well, water right, or easement for water distribution purposes.” *Id.*

³²Cal. Pub. Utilities Code, § 2705.5.

³³Cal. Pub. Utilities Code, § 2705.6.

³⁴Cal. Pub. Utilities Code, § 2706, subds. (a) & (c).

³⁵Cal. Pub. Utilities Code, § 2706, subds. (b) & (c).

³⁶Cal. Pub. Utilities Code, § 2727.

notwithstanding satisfaction of the statutory definition, an entity is not a public utility unless utility property has expressly or impliedly been *dedicated to public use*. Specifically, an act of “dedication” occurs if an entity:

“held himself out, expressly or impliedly, as engaged in the business of supplying [a service or commodity] to the public as a class, not necessarily to all of the public, but to any limited portion of it, such portion, for example, as could be served by his own system, as counterdistinguished from his holding himself out as serving or ready to serve only particular individuals, either as a matter of accommodation or for other reasons peculiar and particular to them.”³⁷

“Whether or not dedication has occurred is a factual question.”³⁸ Moreover, dedication “may be inferred from the acts of the owner and his dealings in relations to the property.”³⁹ Thus, the CPUC must examine the question of dedication on a case-by-case basis.⁴⁰

Powers and Requirements Where CPUC Jurisdiction Applies

General Powers

Where it has jurisdiction, the CPUC also has very broad powers. “The commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in [the Public Utilities Act] or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction.”⁴¹ “Every public utility shall obey and comply with every order, decision, direction, or rule made or prescribed by the commission in the matters specified in this part, or any other matter in any way relating to or affecting its business as a public utility, and shall do everything necessary or proper to secure compliance therewith by all of its officers, agents, and employees.”⁴² “The commission may fix rates, establish rules, examine records, issue subpoenas, administer oaths, take testimony, punish for contempt, and prescribe a uniform system of accounts for all public utilities subject to its jurisdiction.”⁴³

Powers Relating to Practices, Equipment, Appliances, Facilities and Methods

“Whenever the commission, after a hearing, finds that the rules, practices, equipment, appliances, facilities, or service of any public utility, or the methods of manufacture, distribution, transmission, storage, or supply employed by it, are unjust, unreasonable, unsafe, improper, inadequate, or insufficient, the commission shall determine and, by order or rule, fix the rules, practices, equipment, appliances, facilities, service, or methods to be observed, furnished, constructed, enforced, or employed. The commission shall prescribe rules for the performance of any service or the furnishing of any commodity of the character furnished or supplied by any public utility, and, on proper demand and tender of rates, such public utility shall furnish such

³⁷*Van Hoosear v. Railroad Commission* (1920) 184 Cal. 553, 554, quoted in California Public Utilities Commission Decision No. 01-05-058, 209 P.U.R. 4th 497 (May 14, 2001).

³⁸California Public Utilities Commission Decision No. 01-05-058, 209 P.U.R. 4th 497 (May 14, 2001), citing *Haynes v. MacFarlane* (1929) 207 Cal. 529, 532.

³⁹Cal. Water & Tel. Co. v. Public Util. Com. (1959) 51 Cal.2d 476, 494, quoted in California Public Utilities Commission Decision No. 01-05-058, 209 P.U.R. 4th 497 (May 14, 2001).

⁴⁰California Public Utilities Commission Decision No. 01-05-058, 209 P.U.R. 4th 497 (May 14, 2001).

⁴¹Cal. Pub. Utilities Code, § 701.

⁴²Cal. Pub. Utilities Code, § 702.

⁴³Cal. Const., art. XII, § 6.

commodity or render such service within the time and upon the conditions provided in such rules.”⁴⁴

Powers Relating to Measurement

“The commission may after hearing: (a) Ascertain and fix just and reasonable standards, classifications, regulations, practices, measurements, or service to be furnished, imposed, observed, and followed by all . . . water . . . corporations. (b) Ascertain and fix adequate and serviceable standards for the measurement of quantity, quality, pressure, or other condition pertaining to the supply of the product, commodity, or service furnished or rendered by any such public utility. No standard of the commission applicable to any water corporation shall be inconsistent with the regulations and standards of the State Department of Health pursuant to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code. (c) Prescribe reasonable regulations for the examination and testing of the product, commodity, or service and for the measurement thereof. (d) Establish reasonable rules, specifications, and standards to secure the accuracy of all meters and appliances for measurements. The commission shall require a public utility that estimates meter readings to so indicate on its billings, and shall require any estimate that is incorrect to be corrected by the next billing period, except that for reasons beyond its control due to weather, or in cases of unusual conditions, corrections for any overestimate or underestimate shall be reflected on the first regularly scheduled bill and based on an actual reading following the period of inaccessibility. (e) Provide for the examination and testing of any and all appliances used for the measurement of any product, commodity, or service of any such public utility.”⁴⁵

Established Water Meter Standards: General Order 103

In 1956, the CPUC first adopted General Order 103, which sets the minimum standards for water meters applicable to CPUC-regulated water corporations.⁴⁶ The rules set forth in General Order 103 “are designed primarily for utility systems supplying potable water under pressure but shall apply insofar as they may be appropriate to utility systems supplying water not intended or claimed to be potable from ditches, canals or other conduits.”⁴⁷

Pursuant to General Order 103, “[e]ach utility shall install a suitable measuring device, or otherwise determine production, at each source of supply in order that a record may be maintained of the quantity of water produced by each source.”⁴⁸ “At least once each month, the quantity produced from each source of supply shall be determined. Twelve month totals by sources shall be recorded and transmitted to the Commission in the utility’s annual report to the Commission.”⁴⁹

“All water sold by a utility shall be on the basis of metered volume sales except that the utility may at its option provide flat rate or estimated service for the following: (1) Residential, business, commercial, industrial (in special situations) and irrigation service after authorization has first been obtained from the Commission; (2) Temporary service where the water use can be readily estimated; (3) Public and private fire protection service; (4) Water used for street

⁴⁴Cal. Pub. Utilities Code, § 761.

⁴⁵Cal. Pub. Utilities Code, § 770.

⁴⁶California Public Utilities Commission, General Order 103, Rules Governing Water Service Including Minimum Standards for Design and Construction (as amended March 9, 1994), § I.1.a.

⁴⁷General Order 103, § I.2.

⁴⁸General Order 103, § II.4.a.

⁴⁹General Order 103, § II.4.b.

sprinkling and sewer flushing, when provided for by contract between the utility and the municipality or other local governmental authority.”⁵⁰

“All meters used for metered sales excluding sales from irrigation systems or other irrigation sales shall have registration devices indicating the volume of water in either cubic feet or United States gallons.”⁵¹ “Irrigation service may be provided with meters which measure in acre feet or miner’s inch days. This service may also be rendered on a volume basis by the use of a calibrated orifice such as the miner’s inch box, by the use of weirs or otherwise measured as provided in applicable tariff schedules.”⁵²

General Order 103 also contains a variety of other detailed requirements, including a set of requirements pertaining to utility-provided meter test facilities and equipment,⁵³ accuracy requirements,⁵⁴ and others.

Non-Interference With CPUC Jurisdiction

Where the CPUC has jurisdiction, it generally has not only broad powers, but also broad latitude to exercise those powers either to the exclusion of other governmental agencies, or, occasionally, in parallel with other agencies.

“A city, county, or other public body may not regulate matters over which the Legislature grants regulatory power to the Commission. This section does not affect power over public utilities relating to the making and enforcement of police, sanitary, and other regulations concerning municipal affairs pursuant to a city charter existing on October 10, 1911, unless that power has been revoked by the city’s electors, or the right of any city to grant franchises for public utilities or other businesses on terms, conditions, and in the manner prescribed by law.”⁵⁵

“No court of this state, except the Supreme Court and the court of appeal, to the extent specified in this article, shall have jurisdiction to review, reverse, correct, or annul any order or decision of the [CPUC] or to suspend or delay the execution or operation thereof, or to enjoin, restrain, or interfere with the commission in the performance of its official duties, as provided by law and the rules of court.”⁵⁶

Notwithstanding the fact that the Legislature has vested in the Department of Health Services primary responsibility for administration of the safe drinking water laws, including the California Safe Drinking Water Act,⁵⁷ for regulated public utilities the CPUC has authority to regulate and enforce water quality safety and limited authority to adopt water quality standards.⁵⁸

⁵⁰General Order 103, § VI.1.a.

⁵¹General Order 103, § VI.1.b.

⁵²General Order 103, § VI.1.c.

⁵³General Order 103, § VI.2 (b) (pursuant to General Order 103, appen. A, the requirements of section VI, subdivision 2 are not applicable “when sales are measured by other than displacement meters as provided in applicable tariff schedules”).

⁵⁴General Order 103, § VI.3. “All meters used for measuring quantities of water delivered to customers shall be in good mechanical condition, shall be adequate in size and design for the type of service which each measures and shall be accurate to within generally accepted standards.” § VI.3.a. “For determination of minimum test flow and normal test flow limits, the Commission adopts as a guide the appropriate standard specifications of the American Water Works Association for the various types of meters.” § VI.3.b (pursuant to General Order 103, appen. A, the requirements of section VI, subdivision 3.b. are not applicable “when sales are measured by other than displacement meters as provided in applicable tariff schedules”).

⁵⁵Cal. Const., art. XII, § 8.

⁵⁶Cal. Pub. Utilities Code, § 1759, subd. (a).

⁵⁷Cal. Health & Safety Code, § 116325.

⁵⁸*Hartwell Corp. v. Superior Court (Santamaria)* (2002) 27 Cal.4th 256.

Urban Water Management Planning

Policy and Purpose

In 1983, the Legislature enacted the "Urban Water Management Planning Act."⁵⁹ In doing so, the Legislature found and declared that it is the policy of the state that:

- “The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.”
- “The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.”
- “Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.”⁶⁰

Urban Water Suppliers

Under the Act, "urban water supplier" means “a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers.”⁶¹ The Act applies only to water supplied from public water systems subject to the California Safe Drinking Water Act.⁶²

Contents of Plans

Pursuant to the Act, a plan shall be adopted and implemented⁶³ and shall do several things, including the following which relate to measurement:

- Include, if groundwater is identified as an existing or planned source of water available to the supplier:
 - A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
 - A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- Quantify, to the extent records are available, past and current water use (in five-year increments to 20 years or as far as data is available), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:
 - Single-family residential.
 - Multifamily.
 - Commercial.
 - Industrial.

⁵⁹Cal. Water Code, § 10610, et seq.

⁶⁰Cal. Water Code, § 10610.4.

⁶¹Cal. Water Code, § 10617.

⁶²Cal. Water Code, § 10617; Cal. Health & Safety Code, § 116270, et seq.

⁶³Cal. Water Code, § 10643.

- Institutional and governmental.
 - Landscape.
 - Sales to other agencies.
 - Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - Agricultural.
- Provide a description of the supplier's water demand management measures. This description shall include all of the following:
 - A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
 - Metering with commodity rates for all new connections and retrofit of existing connections.
 - System water audits, leak detection, and repair.
 - Conservation pricing.
 - [others]
 - A schedule of implementation for all water demand management measures proposed or described in the plan.
 - A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
 - An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
 - Provide an evaluation of each listed water demand management measure that is not currently being implemented or scheduled for implementation.
 - Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements (described above) relating to a description of the supplier's water demand management measures an evaluation of each listed water demand management measure that is not currently being implemented or scheduled for implementation.⁶⁴
 - The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The plan shall include all of the following:
 - A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

⁶⁴Cal. Water Code, § 10631.

- A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.⁶⁵

Rates

“An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the ‘Memorandum of Understanding Regarding Urban Water Conservation in California’ is deemed to be reasonable for the purposes of this section.”⁶⁶

Grants and Loans

Pursuant to the Act, the Department of Water Resources shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, in evaluating applications for grants and loans to fund urban water conservation projects made available pursuant to the Urban Water Conservation Program under California Water Code, section 79163. The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities.⁶⁷

An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with the Act, is ineligible to receive funding pursuant to the Safe, Clean, Reliable, Water Supply Act⁶⁸ or the Costa-Machado Water Act of 2000,⁶⁹ or to

⁶⁵Cal. Water Code, § 10633.

⁶⁶Cal. Water Code, § 10654.

⁶⁷Cal. Water Code, § 10631.5.

⁶⁸Cal. Water Code, § 78500, et seq.

⁶⁹Cal. Water Code, § 79000, et seq.

receive drought assistance from the state until the urban water management plan is properly submitted.⁷⁰

The Department of Water Resources shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with the Act, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.⁷¹

Water Management or Conservation Plans Required by Other State Law, including Public Utilities Commission and State Water Resources Control Board

“The adoption of [an Urban Water Management Plan pursuant to the Urban Water Management Planning Act] shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.”⁷²

Memorandum of Understanding Regarding Efficient Water Management Practices for Agricultural Water Suppliers in California

A multi-stakeholder Advisory Committee established pursuant to the California Agricultural Water Suppliers Efficient Water Management Practices Act of 1990, Assembly Bill 3616,⁷³ has developed a “Memorandum of Understanding Regarding Efficient Water Management Practices for Agricultural Water Suppliers in California” (“MOU”). In signing the MOU, signatories become members of the Agricultural Water Management Council (“AWMC”). Signatories include approximately thirty water districts, as well as environmental groups and other interested parties. Under the MOU, signatories will evaluate and endorse Water Management Plans. The MOU also provides a mechanism for signatories to plan and implement cost-effective Efficient Water Management Practices (“EWMPs”).

The MOU sets forth lists of EWMPs in three categories. “List A” practices are “Generally Applicable Efficient Water Management Practices.” “List B” practices are “Conditionally Applicable Efficient Water Management Practices.” “List C” practices are “Other Efficient Water Management Practices.” Each Water Management Plan will include all EWMPs from List A. Each Water Management Plan will contain all EWMPs from List B that are found to “generate net water management benefits.” Each Water Management Plan will contain all EWMPs from List C “in the form(s) found to optimize net water management benefits”.

One of the List C practices relates to water measurement and reporting. Under this practice:

⁷⁰Cal. Water Code, § 10656.

⁷¹Cal. Water Code, § 10657. Pursuant to subdivision (b), section 10657 shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

⁷²Cal. Water Code, § 10653.

⁷³Stats 1990, ch. 739, § 1 (AB 3616).

“A water supplier will measure or calculate the volume of water delivered within a reasonable range of accuracy. Such measurement or calculation will be by individual water user or other reasonable measurement/calculation option. A water supplier will provide timely water use reports to water users through billings or advisories.”⁷⁴

Memorandum of Understanding Regarding Urban Water Conservation in California

The Memorandum of Understanding Regarding Urban Water Conservation in California (“MOU”) was first executed with an initial effective date in 1991, and has since been amended several times. The MOU signatories represent urban water suppliers, public advocacy organizations and other interest groups, and collectively constitute the “California Urban Water Conservation Council” (“CUWCC”).

The MOU applies only to the delivery of water for “domestic, municipal and industrial uses,” and does not apply “directly or indirectly” to the use of water for irrigated agriculture. According to its own terms, the MOU “is intended to embody general principles agreed upon between and among the signatories and is not intended to create contractual relationships, rights, obligations, duties or remedies in a court of law between or among the signatories.”

The MOU defines a set of “best management practices” and requires of all signatory water suppliers “a good faith effort” to implement each BMP. The MOU provides that a signatory water supplier will be exempt from the implementation of a specific BMP as long as the supplier substantiates at least one of the following: (a) the BMP would not be “cost effective”; (b) adequate funds to implement the practice “are not and cannot reasonably be made available”; or (c) implementation of the BMP is outside the supplier’s legal authority, the supplier made “a good faith to work with” entities that have such authority others to carry out and remove barriers to the BMP. In addition to exemptions, the MOU also provides for delayed implementation of a supplier can first make certain findings.

BMP Number 4, under the MOU, applies to “metering with commodity rates for all new connections and retrofit of existing connections.” It provides as follows:

- A. *Implementation.* Implementation shall consist of at least the following actions:
 - a. Requiring meters for all new connections and billing by volume of use.
 - b. Establishing a program for retrofitting existing unmetered connections and billing by volume of use.
 - c. Identifying intra- and inter-agency disincentives or barriers to retrofitting mixed use commercial accounts with dedicated landscape meters, and conducting a feasibility study to assess the merits of a program to provide incentives to switch mixed use accounts to dedicated landscape meters.
- B. *Implementation Schedule.*
 - a. Agencies signing the MOU prior to December 31, 1997, implementation shall commence no later than July 1, 1999.

⁷⁴Memorandum of Understanding Regarding Efficient Water Management Practices by Agricultural Water Suppliers in California (November 13, 1996), Ex. A, List C(1).

- b. Agencies signing the MOU or becoming subject to the MOU after December 31, 1997, implementation shall commence no later than July 1 of the second year following the year the agency signed or became subject to the MOU.
- c. A plan to retrofit and bill by volume of use existing unmetered connections to be completed by the end of the first reporting period following the date implementation was to commence.
- d. A feasibility study examining incentive programs to move landscape water uses on mixed-use meters to dedicated landscape meters to be completed by end of the first reporting period following the date implementation was to commence.
- B. *Coverage Requirements.* 100% of existing unmetered accounts to be metered and billed by volume of use within 10 years of date implementation was to commence.
- D. *Requirements for Documenting BMP Implementation*
 - a. Confirmation that all new connections are metered and are being billed by volume of use.
 - b. Number of unmetered accounts in the service area. For the purposes of evaluation, this shall be defined as the baseline meter retrofit target, and shall be used to calculate the agency's minimum annual retrofit requirement.
 - c. Number of unmetered connections retrofitted during the reporting period.
 - d. Number of CII accounts with mixed-use meters.
 - e. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period.
- E. *Criteria to Determine BMP Implementation Status*
 - a. Agency with existing unmetered connections has completed a meter retrofit plan by end of first reporting period following the date implementation was to commence.
 - b. Agency has completed a feasibility study examining incentive programs to move landscape water uses on mixed-use meters to dedicated landscape meters by end of first reporting period following the date implementation was to commence.
 - c. Agency with existing unmetered connections is on track to meter these connections within 10 years of the date implementation was to commence. An agency will be considered on track if the percent of unmetered accounts retrofitted with meters equals or exceeds the following: 10% by end of first reporting period following date implementation to commence; 24% by end of second reporting period; 42% by end of third reporting period; 64% by end of fourth reporting period; and 90% by end of fifth reporting period.
- F. *Water Savings Assumptions.* Assume meter retrofits will result in a 20% reduction in demand by retrofitted accounts.

Bureau of Reclamation Contracts

Standard Contractual Provisions.

Under federal law, Central Valley Project (“CVP”) contracts must include requirements for the employment of water measuring devices or methods.

“All Central Valley Project water service or repayment contracts for agricultural, municipal, or industrial purposes that are entered into, renewed, or amended under any provision of Federal Reclamation Law after the date of enactment of this title, shall provide that the contracting district or agency shall ensure that all surface water delivery systems within its boundaries are equipped with water measuring devices or water measuring methods of comparable effectiveness acceptable to the Secretary within five years of the date of contract execution, amendment, or renewal, and that any new surface water deliveries systems installed within its boundaries on or after the date of contract renewal are so equipped.”⁷⁵

Reporting of Deliveries.

Federal CVP contractors are also required to report water deliveries, not only to the federal government but also to the State of California.

“The contracting district or agency shall inform the Secretary and the State of California annually as to the monthly volume of surface water delivered within its boundaries.”⁷⁶

Criteria for Evaluating Water Management Plans.

Pursuant to section 210 of the Reclamation Reform Act of 1982, districts with certain types of Bureau of Reclamation contracts are required to prepare and submit Water Management Plans to the Bureau.

“Each district that has entered into a repayment contract or water service contract pursuant to Federal reclamation law or the Water Supply Act of 1958, as amended[⁷⁷] shall develop a water conservation plan which shall contain definite goals, appropriate water conservation measures, and a time schedule for meeting the water conservation objectives.”⁷⁸

Pursuant to the Central Valley Project Improvement Act (“CVPIA”), the Bureau of Reclamation

“shall establish and administer an office on Central Valley Project water conservation best management practices that shall, in consultation with the Secretary of Agriculture, the California Department of Water Resources, California academic institutions, and Central Valley Project water users, develop

⁷⁵. Central Valley Project Improvement Act (CVPIA), Pub. L. 102-575, title XXXIV, § 3405(b), Oct. 30, 1992, 106 Stat. 4706.

⁷⁶Id.

⁷⁷43 U.S.C. § 390b.

⁷⁸Reclamation Reform Act of 1982, 43 U.S.C. § 390jj(b).

criteria for evaluating the adequacy of all water conservation plans developed by project contractors, including those plans required by section 210 of the Reclamation Reform Act of 1982.”⁷⁹

In 1996, the Bureau of Reclamation issued in final form an agency guidance document entitled “Criteria for Evaluating Water Management Plans.”⁸⁰ The Bureau of Reclamation subsequently issued revised draft criteria in 1999⁸¹ and 2002.⁸² The Bureau of Reclamation makes these criteria applicable “to water management plans submitted to Reclamation as required by applicable Central Valley Project water delivery contract or any contract that specifically invokes these criteria.”⁸³

The 1996 criteria, and the subsequent revisions in 1999 and 2002, include a requirement that Water Management Plans shall describe . . . “customer water delivery measurements .”⁸⁴ Plans are also supposed to describe, among other things, the District’s incoming flow measurement method and locations.”⁸⁵

An adequate plan is also expected to

“List the total number of customers/connections/turn-outs, the number currently measured and the percentage of customer water deliveries measured. List the types and numbers of measurement devices (e.g., meters, calibrated gates, weirs, etc.), level of accuracy, frequency of calibration, and maintenance and reading schedule.”⁸⁶

Plans are also required to inventory water resources, including developing a water inventory for the contractor based on one of the last two years prior to preparation of each plan.⁸⁷ This inventory includes quantifying both water supplies and water used, in a detailed fashion.⁸⁸

⁷⁹CVPIA § 3405(e).

⁸⁰U.S. Bureau of Reclamation, Mid-Pacific Region, Final Criteria for Evaluating Water Management Plans (Aug. 1996) [“1996 Criteria”].

⁸¹U.S. Bureau of Reclamation, Mid-Pacific Region, Criteria for Evaluating Water Management Plans (1999) [“1999 Draft Criteria”].

⁸²U.S. Bureau of Reclamation, Mid-Pacific Region, Standard Criteria for Evaluating Water Management Plans (Draft June 20, 2002) [“2002 Draft Criteria”].

⁸³2002 Draft Criteria, at p. 1. The following are excepted from the requirement to prepare a water management plan using these criteria: (1) all contractors that receive only irrigation water from any federal reclamation project, and deliver said water to less than 2,000 acres of land; (2) all contractors that receive only municipal and industrial (urban) water from any federal reclamation project, and provide said water to less than 3,300 people; and (3) all contractors that receive less than an annual average of 2,000 acre feet from any federal reclamation project. *Id.*

⁸⁴1996 Criteria, at p. 6; 1999 Draft Criteria, at p. 4; 2002 Draft Criteria, at p. 5.

⁸⁵2002 Draft Criteria, at p. 5.

⁸⁶2002 Draft Criteria, at p. 6; see also 1996 Criteria, at p. 8.

⁸⁷2002 Draft Criteria, at p. 9.

⁸⁸2002 Draft Criteria, at p. 9; see also 1996 Criteria, at pp. 10-11. In quantifying water used, plans are required to state: (a) conveyance losses, including seepage, evaporation, and operational spills; (b) consumptive use by riparian vegetation; (c) applied irrigation water, crop evapotranspiration, water used for leaching and cultural practices (frost protection, soil reclamation, etc.); (d) urban water use; (e) ground water recharge; (f) water exchanges, transfers and banking; (g) estimated deep percolation within the District; (h) flows to perched water table or saline sink; (i) total urban waste water utilized within the system; (j) irrigation spill or drain water leaving the District; and (k) other.

Contractors subject to the criteria are required to develop a program for implementation of certain best management practices (“BMPs”). Separate BMPs are identified for agricultural contractors and urban contractors.

Agricultural Contractors

Agricultural BMPs deemed “critical” are those which all districts “will implement or are already implementing.” In regard to water use measurement, the critical agricultural BMPs in the 1996 Criteria called for districts to

“measure, with a device that is rated to have a maximum error of six percent, the volume of water delivered by the District to each customer (within five years of contract renewal or if no contract renewal date, by January 1, 1999)”⁸⁹

The critical BMPs under the 1999 Draft Criteria called for districts to

“Measure and maintain, to a reasonable degree of accuracy, the volume of water delivered by the Contractor to each customer.”⁹⁰

The critical BMPs under the 2002 Draft Criteria call for contractors to

“Measure the volume of water delivered by the Contractor to each customer. Measure flows with devices that are operated and maintained to a reasonable degree of accuracy, under most conditions, to +/- 6 percent by volume. Three typical categories of measurement devices are: devices with totalizers, standard flow measurement devices, and non-standard but calibrated devices. In most cases this requires a device, which continuously records conditions such as flow or water level during delivery.”

The 2002 Draft Criteria further describe the categories of measurement devices:

“The first category includes devices with totalizers that measure volume: propeller meters, Venturi meters, magnetic meters, and acoustic meters. These have a high level of accuracy with proper installation and periodic maintenance and calibration.

“The second category includes standard flow measurement devices that measure flow rate and also require accurate measurements of water level and delivery time to determine volumes: Replogle and Parshall flumes; rectangular, trapezoidal (Cipolletti) and V-Notch weirs; and canal meter gates. These devices require proper installation; continuous recording of water levels and flow rates; delivery beginning and ending times; adjustments for approach velocity in some cases; and regular maintenance and calibration for good accuracy.

⁸⁹1996 Criteria, at p. 12.

⁹⁰U.S. Bureau of Reclamation, Mid-Pacific Region, Criteria for Evaluating Water Management Plans (1999) [“1999 Draft Criteria”], at p. 9.

“The third category includes non-standard, calibrated flow measurement devices. This category includes special measurement devices developed by a District. Typically, there are no published standard dimensions or flow tables for such devices. Consistent dimensions and installations; accurate determination of delivery time; local calibration and a verification of accuracy, based on a representative sample number of devices measured over time; and a proposed schedule for maintenance and calibration would be necessary for acceptability.

“Rough estimates or instantaneous measurements of flow rate or volume are not acceptable since such measurements do not provide a documented reasonable degree of accuracy. Examples are, flow rate estimates at check structures, the sum of the flow in siphon tubes, the use of occasional flow readings and multiplying by the time between readings, or other methods of measurement not specified here.”⁹¹

In contrast with “critical” BMPs which are considered universally applicable, “exemptible” BMPs are those which a contractor will implement “unless the Contractor provides adequate documentation that supports an exemption or states the reason the BMP is not applicable”⁹² One of the “exemptible” agricultural BMPs described in the 2002 Draft Criteria is measurement of district outflow, under which contractors will:

“Measure at least 80% of the water that leaves control of the Contractor and eventually leaves the district boundary within 10 years. Measure flow with devices that are operated and maintained to a reasonable degree of accuracy, under most conditions, to +/- 6 percent of volume.”⁹³

The 1999 Draft Criteria also attempt to integrate the Bureau of Reclamation’s review of agricultural Water Management Plans with review by the Agricultural Water Management Council (“AWMC”), to the extent possible.⁹⁴

Urban Contractors

The 2002 Draft Criteria state that the urban BMPs “will be evaluated based on the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding, amended March 14, 2001.”⁹⁵ The CUWCC Memorandum of Understanding (“MOU”), by its terms, applies only to signatories of the MOU. The Bureau of Reclamation’s criteria draw from the MOU and make the MOU BMPs applicable to all Bureau contractors subject to the criteria, regardless of whether the contractor has also signed the MOU.

All signatories to the MOU are required to make only “a good faith effort” to implement each BMPs, and certain exceptions apply as well. Under the Bureau’s criteria, certain BMPs are considered “critical” or “not exemptible,” while others are considered “exemptible.” Under 1996 Criteria, the following were considered not exemptible:

⁹¹2002 Draft Criteria, at pp. 10-11.

⁹²2002 Draft Criteria, at p. 10.

⁹³2002 Draft Criteria, at p. 13.

⁹⁴1999 Draft Criteria, at p. 3; 2002 Draft Criteria, at p. 19.

⁹⁵2002 Draft Criteria, at p. 14.

- metering with commodity rates for all new and existing connections;
- distribution system water audits, leak detection and repair;
- landscape efficiency requirements for new/existing commercial, industrial, institutional, governmental and multi-residential developments;
- public information;
- school education;
- new commercial, industrial and institutional water use review;
- conservation pricing (water and sewer service);
- water waste prohibition;
- demand management staff; and
- financial incentives.

The 1999 Draft Criteria added several BMPs, but rendered all BMPs exemptible with the exception of “metering with commodity rates, for all new connections and retrofit of existing connections.”⁹⁶ Under the 2002 Draft Criteria, as well, metering is the only non-exemptible BMP.⁹⁷

The Bureau attempts to harmonize its procedures with the CUWCC MOU procedures by specifying that:

“Urban Contractor can complete an annual update by filling in the information for Urban BMPs on the CUWCC website. Contractors who are signatories of the CUWCC are currently submitting annual reports via the CUWCC’s *BMP Reporting Database* located on their website at www.cuwcc.org. Through an agreement with the CUWCC, Reclamation’s urban non-signatories may now submit their Annual Reports through the CUWCC’s website using ‘guest accounts.’ Urban BMPs are reviewed based on the CUWCC’s MOU (amended March 14, 2001).”⁹⁸

Water Forum Agreement

In 2000, a number of local governments and other organizations in the Sacramento region executed the Memorandum of Understanding for the “Water Forum Agreement.”⁹⁹ Pursuant to that MOU, the signatories agreed to endorse and participate in implementing the Water Forum Agreement, which provided for a set of diversions and facilities for various purveyors, as well as a specified set of actions appropriate to certain signatories.¹⁰⁰

The Water Forum Agreement “adapted” the BMPs from the CUWCC MOU. Under the Water Forum Agreement, purveyors will adopt and implement Water Conservation Plans, incorporating these BMPs.¹⁰¹

⁹⁶1999 Draft Criteria, at p. 10.

⁹⁷2002 Draft Criteria, at p. 14.

⁹⁸2002 Draft Criteria, at p. 15.

⁹⁹For a listing of Water Forum members, see the organization’s website at <http://www.waterforum.org/MEMBER.HTM>.

¹⁰⁰The MOU and Water Forum Agreement “are intended to embody general principles agreed upon between and among the signatories but they are not intended to, and do not, create contractual relationships, rights, obligations, duties or remedies enforceable in a court of law by, between, or among the signatories or any third parties.” MOU for the Water Forum Agreement, sec. F.

¹⁰¹Water Forum Agreement (January 2000), at p. 89.

Residential Meter Retrofit and Conservation Pricing

Two of the applicable BMPs are (1) residential meter retrofit and (2) conservation pricing. The Water Forum Agreement recognizes that, in terms of the extent to which these BMPs are currently being implemented, there are five classes of purveyors:

- *Purveyors that are already fully metered and use volumetric billing.* As to these purveyors, no further requirements are imposed for these BMPs.
- *Purveyors that are, or will become, users of Central Valley Project water supplies, and therefore subject to the water conservation provisions of the Central Valley Project Improvement Act.* As to these purveyors, meter retrofits are already required by the Bureau of Reclamation. The Water Forum Agreement requires that, “if for any reason any or all of their service area is no immediately or in the future subject to the CVPIA meter retrofit requirement, beginning no later than the start of the fourth year after the Water Forum Agreement is signed they would annually retrofit at least 3.3%-5% of the total number of unmetered residential connections as of the date of the Water Forum Agreement.”¹⁰²
- *Purveyors that are not subject to the CVPIA requirements and are not totally reliant on groundwater.* These purveyors, beginning no later than the start of the fourth year after the Water Forum Agreement is signed these purveyors would retrofit at least 3.3%-5% of the total number of unmetered residential connections as of the date of the Water Forum Agreement.¹⁰³
- *Purveyors that are not subject to the CVPIA requirements and are currently totally reliant on groundwater.* These purveyors will implement a program of “active voluntary meter retrofit with incentives.” Also, “[a]t such time as any of these purveyors needs discretionary approvals for new or expanded surface water supplies they agree to annually retrofit at least 3.3%-5% of the total number of unmetered residential connections”¹⁰⁴
- *City of Sacramento.* The City of Sacramento has a provision in its charter prohibiting mandatory residential meters. The City will implement a voluntary meter retrofit program.¹⁰⁵

Purveyors who signed the MOU, also agree not to “implement local retrofit on resale, or any other requirements that would impose escrow or disclosure responsibilities on realtors,” except for “voluntary meter retrofit at time of resale that would not impose escrow or disclosure requirements.”¹⁰⁶

¹⁰²Water Forum Agreement, at p. 90.

¹⁰³Water Forum Agreement, at p. 90.

¹⁰⁴Water Forum Agreement, at p. 90.

¹⁰⁵Water Forum Agreement, at p. 90.

¹⁰⁶Water Forum Agreement, at p. 91.

Signatories further agree to “[a]s soon as practical . . . implement conservation pricing which bases customer charges on the quantity of water used.” Each purveyor has a different schedule for implementing this provision, with a general guideline being six years.¹⁰⁷

Distribution System Water Audits, Leak Detection and Repair

In the Water Forum Agreement, purveyors agree to start implementing certain BMPs within three years of the signing of the agreement.¹⁰⁸ BMPs in this category include “BMP 3,” which applies to distribution system water audits, leak detection and repair. Within this BMP is the requirement that signatories will complete and be maintaining “an ongoing meter calibration and replacement program for all production and distribution meters.”¹⁰⁹

Authorities of Both State Water Resources Control Board and Department of Water Resources

“The department and board shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state.”¹¹⁰

Authorities of the California Department of Water Resources

The California Department of Water Resources (“DWR”) has several powers and authorities pertaining to measurement of water use. DWR “may” do any of the following:

- “[C]arry on . . . investigations into matters pertaining to the water resources of the State along the lines of hydrography, hydroeconomics, and the use and distribution of water for agricultural purposes”¹¹¹
- “Conduct investigations of the rate of use of water for various purposes and considering various soil conditions.”¹¹²
- “Collect records of diversion and use of water.”¹¹³
- “Conduct investigations of all or any portion of any stream, stream system, lake or other body of water.”¹¹⁴

DWR “is authorized to”:

“[C]ollect hydrologic data necessary for river forecasting, to make forecasts of stream flow, to provide for flood warning, and to provide for communication necessary for the collection and dissemination of such information.”¹¹⁵

Pursuant to statute, DWR “shall”:

¹⁰⁷Water Forum Agreement, at p. 92.

¹⁰⁸Water Forum Agreement, at p. 92.

¹⁰⁹Water Forum Agreement, at p. 351.

¹¹⁰Cal. Water Code, § 275.

¹¹¹Cal. Water Code, § 225.

¹¹²Cal. Water Code, § 226(e).

¹¹³Cal. Water Code, § 226(c).

¹¹⁴Cal. Water Code, § 226(a).

¹¹⁵Cal. Water Code, § 236.

- “[C]onduct surveys and investigations relating to the reclamation of water from wastes for beneficial purposes, including but not limited to the determination of quantities of such water presently wasted, and possibilities of use of such water for recharge of underground storage or for agricultural or industrial uses.”¹¹⁶
- “[I]nvestigate conditions of the quality of all waters within the state, including saline waters, coastal and inland, as related to all sources of pollution of whatever nature. . . .”¹¹⁷

DWR or any other public agency that supplies water for agricultural use may:

- Institute a water conservation or efficient water management program, including, among other things, “[u]sing flow measuring devices in the delivery system and providing to farmers, or assisting farmers in the use of, on-farm flow measurement devices.”¹¹⁸

“The department shall update The California Water Plan on or before December 31, 2003, and every five years thereafter.”¹¹⁹ Since 1966, DWR has fulfilled its duty to publish The California Water Plan by publishing the Bulletin 160 series.¹²⁰

As part of updating The California Water Plan every five years, DWR must conduct a study to determine the amount of water needed to meet the state's future needs and to recommend programs, policies, and facilities to meet those needs. One year prior to issuing each update to The California Water Plan, DWR must release a preliminary draft of the assumptions and other estimates upon which the study will be based. DWR must release, at a minimum, assumptions and other estimates relating to all of the following:

- Basin hydrology, including . . . consumptive uses.
- Environmental water needs, including . . . regulatory instream flow requirements, nonregulated instream uses, and water needs by wetlands, preserves, refuges, and other managed and unmanaged natural resource lands.
- Current and projected water use for all of the following:
 - Interior uses in a single-family dwelling.
 - Exterior uses in a single-family dwelling.
 - All uses in a multifamily dwelling.
 - Commercial uses.
 - Industrial uses.
 - Parks and open spaces.¹²¹

Authorities of the State Water Resources Control Board

Statements of Water Diversion and Use.

With specified exceptions, “Each person who, after December 31, 1965, diverts water shall file with the [State Water Resources Control Board], prior to July 1 of the succeeding year, a

¹¹⁶Cal. Water Code, § 230.

¹¹⁷Cal. Water Code, § 229.

¹¹⁸Cal. Water Code, § 10522(b)(1).

¹¹⁹Cal. Water Code, § 10004.

¹²⁰Department of Water Resources, Bulletin 160-98 (November 1998), at p. iii.

¹²¹Cal. Water Code, § 10004.6.

statement of his diversion and use.”¹²² This applies to diverters under riparian rights and diverters under pre-1914 appropriative rights. In such statements, “Those who maintain water-measuring devices and keep monthly records of water diversions shall state the quantity of water diverted by months during the preceding calendar year. Others shall state the acreage of each crop irrigated, the average number of people served with water, the average number of stock watered, and the nature and extent of any other use during the preceding calendar year, or such other equivalent information tending to indicate the quantity of water used as may be prescribed by the board.”¹²³ After filing of the initial statement, supplemental statements are due at three-year intervals.¹²⁴

Suitable Measuring and Recording Devices

“After issuance of a permit for surface diversion or storage or underground storage the permittee may be required to establish suitable measuring and recording devices and to obtain and furnish to the board such records as may be needed to determine with reasonable accuracy: the quantity of water beneficially used; or the quantity of water placed in storage and the quantity later recovered under the provisions of the permit. Permittee may also be required to determine and submit a written statement of the quantities beneficially used.”¹²⁵

Reports of Licensee

State Water Resources Control Board staff who were interviewed indicated that following the water rights Application process, and following issuance of a permit, the permittee is required to submit a Progress Report of Permittee each year.¹²⁶ Upon completion of the diversion project and perfection of the water right, a License is issued. The Licensee is required to submit a Report of Licensee every three years for the life of the water right. The required Report of Licensee specifies, among other things the amount of water taken.

Notices of Extractions and Diversions of Water.

Since 1955, certain measurement rules apply in the Counties of Riverside, San Bernardino, Los Angeles, and Ventura.¹²⁷ In those Counties, persons extracting more than 25 acre-feet of groundwater per year shall file with the State Water Resources Control Board a “Notice of Extraction and Diversion of Water,” with certain exceptions. Among other things, the notice must state the “quantity of water taken and the method of measurement used by such person or his predecessor in interest in each preceding year from each surface or ground water source” going back ten years.¹²⁸ In other words, extraction of groundwater in excess of 25 acre-feet triggers the requirement of filing a notice as to both surface and groundwater. The State Board implements this through issuance of separate “first notice” forms for groundwater extractions and surface water diversions, and separate “annual notices” after filing of the first notices. The State Board has stated that the measurement information obtained through the program “will materially assist in establishing the rights of users to water in the event a judicial determination

¹²²Cal. Water Code, § 5101; see also Cal. Water Code, § 5102.

¹²³Cal. Water Code, § 5103(d).

¹²⁴Cal. Water Code, § 5104.

¹²⁵Cal. Code of Regulations, tit. 23, § 846.

¹²⁶Cal. Code of Regulations, § 847.

¹²⁷Cal. Water Code, § 4999.

¹²⁸Cal. Water Code, § 5002(b).

of rights is invoked to assure orderly and efficient use of water from a common ground water source.”¹²⁹

State Water Resources Control Board staff who were interviewed emphasized that, while the filing of the notices is mandatory, the consequence for noncompliance with the filing requirement is merely that the historical water use information is unavailable to the water user in the event an adjudication occurs. In addition, staff indicated that, as a whole, the degree of accuracy of the data submitted is such that it does not lend itself to aggregation. Individual persons submitting data do not always submit accurately calculated information. The submittals do serve as indicators that extractions are occurring at particular locations.

Measurement in Watermaster Service Areas.

Under state law, owners of conduits and certain reservoirs within watermaster service areas are required to “construct and maintain such water flow measuring devices at such points along the conduit as may be required and approved by the department [of water resources] for the purpose of assisting the watermaster in determining”:

- as to the conduits, the amounts of water “which are being diverted and applied to beneficial use”;¹³⁰
- as to the reservoirs, the amounts of water “to which the owner is entitled and the amounts of water which the owner is diverting, storing, and applying to beneficial use.”¹³¹

Groundwater Management Programs under the Groundwater Management Act of 1992 (A.B. 3030), as amended

Any local agency can adopt a groundwater management plan.¹³² The plan may include components relating to, for example, control of saline water intrusion, facilitating conjunctive use operations, and others.¹³³ With some exceptions, a local agency that adopts a groundwater management plan may, after an election by a majority of those voting, impose equitable annual fees and assessments for groundwater management based on the amount of groundwater extracted from the groundwater basin within the plan area to pay for costs incurred by the local agency for groundwater management.¹³⁴ The Local Groundwater Management Assistance Act of 2000 (A.B. 303) created a fund to be administered by DWR for grants to agencies to carry out activities to manage groundwater.¹³⁵

DWR staff who were interviewed did not identify any adopted groundwater management plans that include provisions relating to measurement. Because of the decentralized nature of the groundwater management plan process, however, not all such plans come to DWR’s attention.

¹²⁹Information Relating to Recordation of Water Extractions and Diversions in Riverside, San Bernardino, Los Angeles and Ventura Counties, 91-3 WR, State of California Water Resources Control Board (June 1991), p. 1.

¹³⁰Cal. Water Code, § 4103; see also Cal. Water Code, § 4104.

¹³¹Cal. Water Code, § 4125; see also Cal. Water Code, § 4126.

¹³²Cal. Water Code, § 10753(a).

¹³³Cal. Water Code, § 10753.7.

¹³⁴Cal. Water Code, §§ 10754.2, 10754.3.

¹³⁵Cal. Water Code, §§ 10795-10795.20.

Groundwater Management Districts

Several statutes have been enacted that create particular groundwater management districts having particular powers.¹³⁶ Most of these statutes empower the districts to require or engage in measurement of water use. Each of the statutory districts is in a different stage of implementation, both in regard to general operational matters such as appointment of Board members and in regard to specific programmatic matters such as establishing or carrying out measurement requirements. Below are representative provisions that are found in some of the distinct legislative acts that pertain to such districts.

Required registration and requirements

“The district may require extraction facilities to be registered with the district and measured with a water flow measuring device installed and calibrated by the district or, at its option, by the extraction facility operator. The district may also require any new extraction facility which is constructed, existing extraction facility which is deepened, or abandoned extraction facility which is reactivated to be registered with the district within 60 days of completion of construction, deepening, or reactivation, and measured with a water flow measuring device installed and calibrated by the district or, at its option, by the extraction facility operator.”¹³⁷ As to some districts, the statute provides that the district “shall” require measuring devices.¹³⁸

Unlawful extraction and civil liability

“No person may extract groundwater from any extraction facility required to be registered unless the extraction facility has been registered with the district and, if required, has a water flow measuring device affixed. Any person who does not comply with this section shall be liable civilly for a sum not to exceed one thousand dollars (\$ 1,000) for each day this section is not complied with”¹³⁹

Groundwater extraction statement

The district may require the operator of each extraction facility to file with the district “a statement relative to groundwater extraction, including, but not limited to, the gallons per minute which may be extracted from each extraction facility, the static groundwater level for each extraction facility, a general description or number locating each extraction facility, use and acreage served by the extraction facility, and the method of measuring or computing groundwater extraction.”¹⁴⁰ Such statements may also be required to include total extraction in acre-feet of water from the extraction facility for the preceding year, and the soil and crop types for agricultural uses.¹⁴¹

Alternative methods for estimating water use

“When a water-measuring device is not permanently attached to a water-producing facility, the board may establish a method or methods to be used in computing the amount of water

¹³⁶See, e.g., Fox Canyon Groundwater Management Agency, Cal. Uncod. Water Deer., Act 2750 (2001); Honey Lake Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 2793 (2001); Monterey Peninsula Water Management District Law, Cal. Uncod. Water Deer., Act 5065 (2001); Ojai Basin Groundwater Management Agency Act, Cal. Uncod. Water Deer., Act 7140B (2001); Orange County Water District Act, Cal. Uncod. Water Deer., Act 5683 (2001); Pajaro Valley Water Management Agency, Cal. Uncod. Water Deer., Act 5695, (2001); Santa Clara Valley Water District Act, Cal. Uncod. Water Deer., Act 7335 (2001); Sierra Valley and Long Valley Groundwater Basins, Cal. Uncod. Water Deer., Act 7662 (2001); Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 (2001).

¹³⁷Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 601 (2001).

¹³⁸Ojai Basin Groundwater Management Agency Act, Cal. Uncod. Water Deer., Act 7140B, § 804 (2001).

¹³⁹Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 603 (2001).

¹⁴⁰Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 604 (2001).

¹⁴¹Pajaro Valley Water Management Agency, Cal. Uncod. Water Deer., Act 5695, § 603, subds. (a) & (d) (2001).

produced from such water-producing facilities. [¶] Such methods may be based upon any, or all, or a combination of some of the following criteria: the minimum charge sufficient to cover administrative costs of collection, size of water-producing facility discharge opening, area served by the water-producing facility, number of persons served by the water-producing facility, use of land served by the water-producing facility, crops grown on land served by the water-producing facility, or any other criteria which may be used to determine with reasonable accuracy the amount of water produced from such water-producing facility.”¹⁴²

Record of extraction accuracy and investigation

“When a water flow measuring device is used at an extraction facility, the record of extraction, as disclosed by the water flow measuring device, shall be presumed to be accurate and shall be used as the basis for computing the water extraction of the extraction facility in completing the groundwater extraction statement. The district may require proof of the accuracy of the water flow measuring device from the operator and may, absent adequate proof of accuracy, order the operator to have the water flow measuring device calibrated in a manner acceptable to the district. If the district has probable cause to believe that the extraction of groundwater from any extraction facility is in excess of the amount reported in groundwater extraction statements, or if no statements are filed covering an extraction facility, the district may investigate the extraction of water from each such extraction facility.”¹⁴³

Civil liability

“Any person who does not file a groundwater extraction statement, if required to do so, or any person who injures, alters, removes, resets, adjusts, manipulates, obstructs, or in any manner interferes or tampers with, or procures, causes, or directs any person to injure, alter, remove, reset, adjust, manipulate, obstruct, or in any manner interfere or tamper with, any water flow measuring device affixed to any extraction facility as required by this act so as to cause the water flow measuring device to improperly or inaccurately measure and record water extraction, or any person who, with intent to evade any provision or requirement of this act, files with the district any false or fraudulent groundwater extraction statement, shall be liable civilly in a sum of not more than one thousand dollars (\$ 1,000).”¹⁴⁴

Basis of calculating groundwater extraction charges

“Groundwater extraction charges shall be calculated on the basis of groundwater extraction statements required to be filed pursuant to this act.”¹⁴⁵

Injunctive relief against noncompliance

“Upon the failure of any person to comply with any of the provisions of this act, including, but not limited to, the registration of extraction facilities and installation of measuring devices, filing of statements, payment of extraction charges, or payment of management charges, or upon the failure of any person to comply with any ordinance adopted by the board of directors pursuant to this act, the district may petition the superior court of the county for a temporary restraining order or preliminary or permanent injunction prohibiting the person from operating an extraction facility or for other injunctive relief that may be appropriate.”¹⁴⁶

¹⁴²Monterey Peninsula Water Management District Law, Cal. Uncod. Water Deer., Act 5065, § 354 (2001).

¹⁴³Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 605 (2001).

¹⁴⁴Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 607 (2001).

¹⁴⁵Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 805 (2001).

¹⁴⁶Willow Creek Valley Groundwater Basin Act, Cal. Uncod. Water Deer., Act 9171 § 1201 (2001).

Transfers and Conjunctive Use

There are several different types of water transfers that can occur under California and federal law. The measurement requirements associated with each statutory type of transfer are described below. In addition to these, individual state or federal contracts may contain provisions regarding transfers.

Certain measurement requirements are also associated with conjunctive use of surface and groundwater, as described below. In general, to avoid losing a water right through one of these approaches, a user may be required to document the previous use of water proposed to be foregone in the future.

Temporary urgency changes under Water Code, §§ 1435-1442.

Before issuing an order allowing a “temporary urgency change,” the State Water Resources Control Board must find, among other things, that: (1) the permittee urgently needs the change; (2) the change will not injure any other lawful user; (3) the change will not unreasonably effect fish or wildlife; and (4) the change is in the public interest.¹⁴⁷ Before making necessary findings, the State Board must review available records which relate to the rights of other legal users. (Water Code, § 1437.)

Temporary changes under Water Code, §§ 1725-1732.

The State Board must approve a proposed “temporary change” if: (1) the change would not injure any legal user of water through, among other things, significant changes in water quantity; and (2) the proposed change would not unreasonably affect fish and wildlife.¹⁴⁸ Before approving a petition for change, the State Board must determine “if the water proposed to be transferred would have been consumptively used or stored pursuant to petitioner’s permit or license in the absence of the proposed transfer or conserved pursuant to Section 1011.”¹⁴⁹ Petitioners for temporary changes are not allowed to initiate or increase the use of groundwater to replace surface water transferred by their petition, except in limited circumstances.¹⁵⁰

Long-term transfers under Water Code, §§ 1735-1737.

The State Board may approve a petition for a “long-term transfer” where the change would not result in substantial injury to any legal user of water and would not unreasonably affect fish and wildlife.¹⁵¹

Surplus water transfers under Water Code, §§ 380-387.

Local or regional public agencies authorized to serve water within a service area may sell, lease, exchange, or otherwise transfer water for use outside the agency if the water is: (1) surplus to the needs of the water users of the agency; or (2) voluntarily foregone during the period of the transfer by a water user of the agency.¹⁵² The State Board can approve a petition for a long-term transfer under these provisions where the change would not result in substantial injury to any legal user of water, would not unreasonably affect fish and wildlife, and would not unreasonably affect the overall economy of the area from which the water is being transferred. When a transfer under section 382 is of conserved water, the user’s water rights are protected under Water Code section 1011, which recognizes conservation as a reasonable and beneficial use. When a user is seeking the benefit of section 1011, the State Board may require that user to “file periodic reports describing the extent and amount of the reduction in water use due to

¹⁴⁷ Cal. Water Code, § 1435(b).

¹⁴⁸ Cal. Water Code, § 1727(b).

¹⁴⁹ Cal. Water Code, § 1726(e).

¹⁵⁰ Cal. Water Code, § 1732.

¹⁵¹ Cal. Water Code, § 1736.

¹⁵² Cal. Water Code, § 382.

conservation efforts.”¹⁵³ Similar provisions apply in the case reductions of use as the result of use of recycled, desalinated or polluted water.¹⁵⁴

Transfers of water conserved or available through contracts under Water Code, §§ 1745-1745.11.

A water supplier (either a public agency or private company supplying or storing water) may transfer water to a state drought water bank or to any other water supplier or user.¹⁵⁵ The water supplier may only do so if no other user will receive less than the amount provided by their allocation for that year or be otherwise unreasonably adversely affected without their consent.¹⁵⁶ Water that can be transferred by this method includes conserved water or water made available pursuant to a contract by the user to reduce their use (including by fallowing).¹⁵⁷ The amount of water made available by land fallowing may not exceed 20 percent of the water that would have been applied or stored by the water supplier in the absence of any contract under these provisions.¹⁵⁸

Conjunctive use—pumping in lieu of using surface water.

If use of surface water under an appropriative right is replaced by groundwater pumping, the reduction in use of the surface water is a reasonable and beneficial use “to the extent of the cessation of, or reduction in, use, and to the same extent as the appropriated water was put to reasonable and beneficial use by that person.”¹⁵⁹ The State Board may require any holder of an appropriative right who seeks the benefit of this section 1011.5 “to file periodic reports describing the extent and amount of the reduction in water use due to substitution of an alternate supply.”¹⁶⁰

Conjunctive use—use of surface water in lieu of pumping.

Use of surface water in lieu of groundwater extraction is a reasonable and beneficial use if the surface water is imported or is conserved by a water conservation plan.¹⁶¹ Any user of imported or conserved water seeking the benefit of this section 1005.1 “shall file” with the State Board and annual “statement of the amount” of imported or conserved water applied to reasonable beneficial use pursuant to the provisions of section 1005.1 during the previous water year.

Replenishment of groundwater through cessation or reduction in extraction due to use of water that is imported or is conserved through a conservation plan is also a reasonable and beneficial use.¹⁶² Any water user seeking the benefit of these sections “shall file” with the State Board a statement of the amounts of the reduction in the extraction of ground water due to use of imported or conserved water during the previous water year.

CVPIA transfers

Under the federal Central Valley Project Improvement Act, recipients of Central Valley Project water may transfer that water, but the amount transferred may not exceed in one year the average of water delivered during the last three normal delivery years prior to October 30, 1992.

¹⁵³Cal. Water Code, § 1011(a).

¹⁵⁴Cal. Water Code, § 1010.

¹⁵⁵Cal. Water Code, §§ 1745, 1745.02, 1745.04.

¹⁵⁶Cal. Water Code, § 1745.04.

¹⁵⁷Cal. Water Code, § 1745.05(a).

¹⁵⁸Cal. Water Code, § 1745.05(b).

¹⁵⁹Cal. Water Code, § 1011.5(b).

¹⁶⁰Cal. Water Code, § 1011.5(b).

¹⁶¹Cal. Water Code, § 1005.1.

¹⁶²Cal. Water Code, §§ 1005.2, 1005.4.

The water subject to any such transfer “shall be limited to water that would have been consumptively used or irretrievably lost to beneficial use during the year or years of the transfer.”¹⁶³ Pursuant to Bureau of Reclamation interim guidelines implementing these provisions, “Crop consumptive use” is “the total evapotranspiration of applied water minus effective precipitation and does not include transportation losses, return flows, leaching, frost protection, or deep percolation to usable groundwater basins.” “Project water irretrievably lost to beneficial use” is “deep percolation to an unusable groundwater aquifer (e.g., a saline sink or a groundwater aquifer that is polluted to the degree that water from that aquifer cannot be directly used).”¹⁶⁴

¹⁶³Central Valley Project Improvement Act (CVPIA), Pub. L. 102-575, title XXXIV, § 3405(a)(1)(A)&(I), Oct. 30, 1992, 106 Stat. 4706.

¹⁶⁴Interim Guidelines for Implementation of the Water Transfer Provisions of the Central Valley Project Improvement Act (October 28, 1999).

TABLE X. SWRCB WATER RIGHTS PERMIT TERMS REQUIRING MEASUREMENT.

Permit Term	Topic Heading	Summary	Comments
<i>1. Terms Directly Requiring Measurement (Diversion and Reservoir Releases)</i>			
R	Measuring Devices – Direct Diversion	Install and maintain measurement devices satisfactory to SWRCB; retain formal record of rate and quantity of water diverted.	
46	Measuring Devices – Offstream Storage	Install and maintain measurement devices satisfactory to SWRCB; measure water diverted into and released from or flowing out of reservoir.	
85A	Diversion Restriction – Napa Valley	Before diverting water after 3/15, install and maintain measurement devices satisfactory to watermaster.	
86	Upper Putah Creek – Direct Diversion	Maintain measurement device satisfactory to SWRCB, to measure direct diversions. “A satisfactory device” is further defined.	
87	Upper Putah Creek – On Stream And Offstream Storage	Maintain measurement device satisfactory to SWRCB, to measure diversions to storage. “A satisfactory device” is further defined.	
88	Upper Putah Creek – Direct Diversion Plus Storage	Maintain measurement device satisfactory	

This information has not been confirmed by CALFED advisory and decision-making bodies. It is intended solely to foster informal stakeholder discussions and elicit preliminary feedback. Anyone using this information beyond the Staff Work Group is asked to appropriately characterize the nature of this material.

Permit Term	Topic Heading	Summary	Comments
		to SWRCB, to measure direct diversions. “A satisfactory device” is further defined.	
211 (Term D)	Special Navarro River Terms	Measure rate/quantity of diversion; maintain records for DWR.	
B	Purchase From Nevada Irrigation District	For storage on sources affecting NID, measure flow in and out of reservoir.	

2. Terms Directly Requiring Measurement (Underground Storage and Recovery)			
117	Measuring Devices – Underground Storage	Install and maintain measurement device satisfactory to SWRCB; no diversion from underground storage prior to device installation.	
3. Terms Directly Requiring Measurement (Levels/Staff Gages)			
47	Measuring Devices – Reservoir Staff Gage(s)	Install and maintains staff gages satisfactory to SWRCB to measure reservoir levels; report readings to SWRCB.	
D1	Tributaries To Clear Lake – Agreement	Install and maintain staff gages satisfactory to SWRCB to measure reservoir levels; calibrated to storage in acre-feet; report readings to SWRCB, YCFC and WCD.	
4. Terms Directly Requiring Measurement (Bypass Flows)			
60	Reservoir Stream Flow Bypass For Fish And Wildlife	Submit Compliance Plan satisfactory to DWR; describe how bypass flows will be measured.	
61	Fish And Wildlife Bypass – Napa River	Stream flows shall be measured at nearest USGS Gaging Station or by measuring device acceptable to SWRCB.	
62A	Measuring Device For Bypass Single -- Project	Install and maintain measuring device	

This information has not been confirmed by CALFED advisory and decision-making bodies. It is intended solely to foster informal stakeholder discussions and elicit preliminary feedback. Anyone using this information beyond the Staff Work Group is asked to appropriately characterize the nature of this material.

	not Built	satisfactory to SWRCB prior to diversion.	
62AP	Measuring Devices For Bypass -- Multiple Project not Built	Install and maintain measuring device satisfactory to SWRCB prior to diversion.	
62B	Measuring Device For Bypass -- Single, Project Built	Install and maintain measuring device satisfactory to SWRCB prior to diversion.	
62BP	Measuring Device For Bypass -- Multiple, Project Built	Install and maintain measuring device satisfactory to SWRCB prior to diversion.	
70	Flow Bypass Compliance Plan	Submit Compliance Plan to DWR including description of measuring devices installed (or to be installed); no diversion prior to Plan approval.	
200	Fish & Wildlife Protection Bypass Term	Install and maintain measuring device (preferably passive bypass structure) satisfactory to SWRCB.	
201	Pulse Flow Bypass Term For Coastal Streams	Install and maintain measuring device (to measure pulse flow) satisfactory to SWRCB.	
204	Responsibility For Measuring Device For Bypass (If Using A USGS- Or DWR- Operated Gage)	If stream gages operated by USGS or DWR are not available for stream flow measurements, equivalent gages, satisfactory to DWR, must be	

This information has not been confirmed by CALFED advisory and decision-making bodies. It is intended solely to foster informal stakeholder discussions and elicit preliminary feedback. Anyone using this information beyond the Staff Work Group is asked to appropriately characterize the nature of this material.

		installed near inoperable ones.	
211 (Term A)	Special Navarro River Terms	If stream gages are not available for stream flow measurements, equivalent gages, satisfactory to DWR, must be installed.	
G	Fish Bypass On Lower Pescadero Creek Or Butano Creek (San Mateo County)	Install and maintain measuring device satisfactory to SWRCB.	
<i>5. Terms Reserving/Identifying General Authority to Impose a Variety of Requirements</i>			
12	Continuing Authority	Specifically mentions imposition of additional measurement requirements as one possible exercise of continuing authority.	

Sources: State Water Resources Control Board, Division of Water Rights, Permit Terms (March 2001).

Text of State Water Resources Control Board Standard Permit Terms Requiring Measurement

Terms Directly Requiring Measurement (Diversions and Reservoir Releases)

Permit Term R Title: Measuring Devices – Direct Diversion

When Used: For direct diversion when a formal record of the quantity of water diverted is desired.

Term: Permittee shall install and maintain devices satisfactory to the State Water Resources Control Board to measure (the instantaneous rate of diversion and cumulative quantity of water diverted under this permit)^a. (the daily quantity of water diverted under this permit)^b. A record of such measurements shall be maintained by the permittee, and made available to interested parties upon reasonable request. (A copy of the records shall be submitted to the State Water Resources Control Board with the annual “Progress Report by Permittee”)^c.

Permittee shall allow (name of party), or a designated representative, reasonable access to measuring devices for the purpose of verifying measurement readings.

- a) for direct diversion in cubic feet per second or gallons per minute.
- b) for direct diversion in gallons per day.
- c) Use when it is anticipated that the measurement records will definitely be needed by the Board.

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Permit Term 46 Title: Measuring Devices – Offstream Storage

When Used: For offstream storage, as needed.

Term: Permittee shall install and maintain devices satisfactory to the State Water Resources Control Board to measure the rate and quantity of water diverted into the reservoir from _____, and water released from or flowing out of the reservoir*

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* Delete last clause if not applicable to the particular situation.

Permit Term 85A Title: Diversion Restriction – Napa Valley

When Used: For direct diversion and storage after March 15 for frost protection, irrigation, and/or heat control from the Napa River or its tributaries. Do not use on tributaries if frost protection is not a purpose of use or for onstream winter storage on small tributaries. Do not use on Conn Creek above Lake Hennessey.

Term: Diversion of water between March 15 and May 15 is subject to control under a water distribution program administered by the State Water Resources Control Board or by the Department of Water Resources. Whenever such a program is in effect at the project location, permittee shall comply with the following:

- A. Diversion after March 15 is contingent upon participation in the water distribution program by permittee.

B. Diversion after March 15 shall be solely to replenish water stored prior to March 15 unless otherwise authorized by the Watermaster in charge of the distribution program.

C. Prior to making diversions after March 15, permittee shall install and maintain devices, satisfactory to the Watermaster, which are capable of measuring the instantaneous rate of diversion and the total amount of water diverted during participation in the distribution program.

D. Permittee's participation in any water distribution program required under the terms of this permit shall be evidenced by returning the information sheet distributed prior to the frost season and paying costs as apportioned at the end of the season.

E. The water distribution program required under this permit may be revised periodically by the State Water Resources Control Board provided that the program shall be substantially consistent with terms of any water distribution program imposed on similarly situated users by the Napa County Superior Court.

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Permit Term 86

Title: Upper Putah Creek – Direct Diversion

When Used: Terms and conditions for continuation permits and new permits pursuant to SWRCB order WR 96-002 (Section 7.1 WR 96-002, pg 11-15). For direct diversion from Putah Creek and its tributaries upstream from the Solano project of the USBR (drainage into Lake Berryessa).

Term: Permittee shall comply with the following provisions which are derived from the Condition 12 Settlement Agreement dated March 10, 1995 (Agreement) pursuant to the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565:

(1) Permittee is hereby put on notice that the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565, has retained jurisdiction over the parties and, upon application by the watermaster, has the right to temporarily enjoin the diversion of water under this permit for noncompliance with the terms of the Agreement.

(2) Diversion of water under this permit shall be subject to the watermaster appointed by the court to enforce the terms of the Agreement. The permittee shall be responsible for partial payment of the watermaster costs in accordance with the terms of the Agreement.

(3) Permittee shall maintain a device, satisfactory to the SWRCB, which is capable of measuring water directly diverted under this permit. A satisfactory device includes: For Pumping Stations: (1) In-line flow meter having instantaneous and total flow reading capability, or (2) Proof of a pump test performed within the last 5 years together with official monthly power consumption records for the electric meter serving the pump. For

Gravity Diversions: A weir, flume, or other flow measuring device that is properly installed, or a flow-rating curve established by volumetric measurements.

(4) Permittee shall maintain monthly records of direct diversion from March 1 to July 15 of each year, or such other period as may be specified with written notice to the permittee by the watermaster.

(5) Permittee shall report to the watermaster annually, all diversions under this permit by September 1 of each year on forms approved by the watermaster.

(6) Permittee shall allow the watermaster reasonable access to the project covered by this permit to inspect measuring equipment and to observe compliance with these permit terms and conditions, upon 48-hour prior notice and upon such reasonable conditions as permittee may prescribe.

(7) Permittee is hereby put on notice that there may be years when diversion of water under this permit will not be within the reservation of water established for the Putah Creek watershed upstream of Monticello Dam, as set forth in the Agreement and that in those years no water may be available under this permit, and that releases of stored water may be required.

(8) Permittee is hereby put on notice that the waiver of priority granted by Reclamation and Solano County Water Agency provides that in the event Allowable Depletion is exceeded in any year, water diverted to storage that year shall be released and/or direct diversions shall be curtailed during the ensuing season(s), when applicable, to the extent necessary to bring the Allowable Depletion into compliance, in the following order:

a. All amounts directly diverted and/or diverted to storage by holders of Post-Reservation Water Rights in excess of 120 percent of that water right holder's previous five-year average, in reverse order of water right priority.

b. All amounts directly diverted and/or diverted to storage by holders of Post-Reservation Water Rights above the previous five-year average diversion, in reverse order of priority.

c. All remaining water directly diverted and/or diverted to storage that year by holders of Post-Reservation Water Rights in reverse order of priority.

(9) In any year in which Annual Depletion exceeds Allowable Depletion, if Lake Berryessa: (1) does not drop below 640,000 acre-feet in storage as of May 1, permittee shall have three years, starting in the next Accumulation Season, to make up or repay permittee's excess diversions; or (2) does not reach 640,000 acre-feet of storage as of May 1, permittee shall have one year, starting in the next Accumulation Season, to make up or repay permittee's excess diversions. In the event that Lake Berryessa spills at any

time prior to full payback of excess depletion, permittee shall be excused from any further obligation for repayment of the overage.

(10) Permittee shall provide watermaster prior notice of any repayment. Repayment may be made either by releases from storage, curtailment of direct diversion, or by the provision of water from other sources.

(11) Permittee shall notify the watermaster of any change in ownership of land, changes in the water right, or changes in address related to the permit.

(12) Permittee is hereby put on notice of permittee's right, upon reasonable prior notice, to inspect and to copy, at permittee's own expense, all records and reports of the watermaster.

(13) Solely for purposes of administering Post-Reservation Depletion, the average annual depletion assigned to this project is ____ acre-feet per annum as calculated by the watermaster using information described in Exhibit C of the Condition 12 Settlement Agreement. Permittee shall notify the watermaster of any change in crop type, acreage irrigated, and irrigation method. Any change in water usage which results in an increase in average annual depletion of more than 10 percent for non-weather related reasons, as determined by the watermaster, will require filing a new water right application. (Agreement pp. 13-15, Exhibit E)

Inclusion in the permit of certain provisions of this Agreement shall not be construed as disapproval of other provisions of the Agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.

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The State Water Resources Control Board (SWRCB) shall have continuing authority under article X, section 2 of the California Constitution, Water Code Sections 100 and 275, and the common law public trust doctrine over this permit to delete, revise, amend, or adopt new terms or conditions to: (1) implement the March 10, 1995, Condition 12 Settlement Agreement and any amendments to the agreement and (2) make the terms or conditions consistent with any order of the superior court. No action shall be taken pursuant to this paragraph unless the SWRCB provides notice to affected parties and provides an opportunity for a hearing.

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Permit Term 87

Upper Putah Creek – ON STREAM AND OFFSTREAM STORAGE

When Used: Terms and conditions for continuation permits and new permits pursuant to SWRCB order WR 96-002 (section 7.1 wr 96-002, pg 11-15). For storage in Putah Creek and its tributaries upstream from the Solano Project of the USBR (drainage into Lake Berryessa).

Term: Permittee shall comply with the following provisions which are derived from the Condition 12 Settlement Agreement dated March 10, 1995 (Agreement) pursuant to the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565:

- (1) Permittee is hereby put on notice that the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565, has retained jurisdiction over the parties and, upon application by the watermaster, has the right to temporarily enjoin the diversion of water under this permit for noncompliance with the terms of the Agreement.
- (2) Diversion of water under this permit shall be subject to the watermaster appointed by the court to enforce the terms of the Agreement. The permittee shall be responsible for partial payment of the watermaster costs in accordance with the terms of the Agreement.

Pick One of the following, based on method of diversion.

For Onstream Storage Projects (correct for multiple reservoirs)*

- (3) Within one year of the construction of the reservoir covered by this permit, permittee shall have the capacity of the reservoir surveyed by a registered civil engineer or licensed surveyor. A copy of the survey and area-capacity curve shall be provided to the watermaster and the SWRCB.
- (4) Permittee shall install and properly maintain in the reservoir a staff gage, satisfactory to the watermaster and the SWRCB, for the purpose of determining water levels in the reservoir. Permittee shall record the staff gage readings on October 1 of each year and April 30 of the succeeding year, or such other period as may be specified by the watermaster with written notice to the permittee.

For Offstream Storage Projects

- (3) Permittee shall install and maintain a device, satisfactory to the SWRCB, capable of measuring water diverted to storage under this permit. Satisfactory devices shall include: For Pumping Stations: (1) In-line flow meter having instantaneous and total flow reading capability, or (2) Proof of a pump test performed within the last 5 years together with official monthly power consumption records for the electric meter serving the pump. For Gravity Diversions: A weir, flume, or other flow measuring device that is properly installed, or a flow-rating curve established by volumetric measurements.
- (4) Permittee shall maintain monthly records of diversion to offstream storage from October 1 of each year to April 30 of the succeeding year, or such other period as may be specified with written notice to the permittee by the watermaster.
- (5) Permittee shall report to the watermaster annually, all diversions under this permit by September 1 of each year on forms approved by the watermaster.
- (6) Permittee shall allow the watermaster reasonable access to the project covered by this permit to inspect measuring equipment and to observe compliance with these

permit terms and conditions, upon 48-hour prior notice and upon such reasonable conditions as permittee may prescribe.

- (7) Permittee is hereby put on notice that there may be years when diversion of water under this permit will not be within the reservation of water established for the Putah Creek watershed upstream of Monticello Dam, as set forth in the Agreement and that in those years no water may be available under this permit, and that releases of stored water may be required.
- (8) Permittee is hereby put on notice that the waiver of priority granted by Reclamation and Solano County Water Agency provides that in the event Allowable Depletion is exceeded in any year, water diverted to storage that year shall be released and/or direct diversions shall be curtailed during the ensuing season(s), when applicable, to the extent necessary to bring the Allowable Depletion into compliance, in the following order:
 - a. All amounts directly diverted and/or diverted to storage by holders of Post-Reservation Water Rights in excess of 120 percent of that water right holder's previous five-year average, in reverse order of water right priority.
 - b. All amounts directly diverted and/or diverted to storage by holders of Post-Reservation Water Rights in reverse order of priority.
 - c. All remaining water directly diverted and/or diverted to storage that year by holders of Post-Reservation Water Rights in reverse order of priority.
- (9) In any year in which Annual Depletion exceeds Allowable Depletion, if Lake Berryessa: (1) does not drop below 640,000 acre-feet in storage as of May 1, permittee shall have three years, starting in the next Accumulation Season, to make up or repay permittee's excess diversions; or (2) does not reach 640,000 acre-feet of storage as of May 1, permittee shall have one year, starting in the next Accumulation Season, to make up or repay permittee's excess diversions. In the event that Lake Berryessa spills at any time prior to full payback of excess depletion, permittee shall be excused from any further obligation for repayment of the overage.
- (10) Permittee shall provide watermaster prior notice of any repayment. Repayment may be made either by releases from storage, curtailment of direct diversion, or by the provision of water from other sources.
- (11) Permittee shall notify the watermaster of any change in ownership of land, changes in the water right, or changes in address related to the permit.
- (12) Permittee is hereby put on notice of permittee's right, upon reasonable prior notice, to inspect and to copy, at permittee's own expense, all records and reports of the watermaster.

- (13) Solely for the purposes of administering Post-Reservation Depletion, the average annual depletion assigned to this project is _____ acre-feet per annum as calculated by the watermaster using information described in Exhibit C of the Condition 12 Settlement Agreement. Permittee shall notify the watermaster of any change in crop type, acreage irrigated, and irrigation method. Any change in water usage which results in an increase in average annual depletion of more than 10 percent for non-weather related reasons, as determined by the watermaster, will require filing a new water right application. (Agreement pp. 13-15, Exhibit E)

Inclusion in the permit of certain provisions of this Agreement shall not be construed as disapproval of other provisions of the Agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.

(0000024)

The State Water Resources Control Board (SWRCB) shall have continuing authority under article X, section 2 of the California Constitution, Water Code sections 100 and 275, and the common law public trust doctrine over this permit to delete, revise, amend, or adopt new terms or conditions to: (1) implement the March 10, 1995, Condition 12 Settlement Agreement and any amendments to the agreement and (2) make the terms or conditions consistent with any order of the superior court. No action shall be taken pursuant to this paragraph unless the SWRCB provides notice to affected parties and provides an opportunity for a hearing.

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Permit Term 88

Upper Putah Creek – Direct Diversion Plus Storage

When Used: Terms and conditions for continuation permits and new permits pursuant to SWRCB order WR 96-002 (section 7.1 wr 96-002, pg 11-15). For direct diversion plus storage in Putah Creek and its tributaries upstream from the Solano Project of the USBR (drainage into Lake Berryessa).

Term: Permittee shall comply with the following provisions which are derived from the Condition 12 Settlement Agreement dated March 10, 1995 (Agreement) pursuant to the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565:

- (1) Permittee is hereby put on notice that the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565, has retained jurisdiction over the parties and, upon application by the watermaster, has the right to temporarily enjoin the diversion of water under this permit for noncompliance with the terms of the Agreement.
- (2) Diversion of water under this permit shall be subject to the watermaster appointed by the court to enforce the terms of the Agreement. The permittee shall be responsible for partial payment of the watermaster costs in accordance with the terms of the Agreement.

(3) Within one year of the construction of the reservoir covered by this permit, permittee shall have the capacity of the reservoir surveyed by a registered civil engineer or licensed surveyor. A copy of the survey and area-capacity curve shall be provided to the watermaster and the SWRCB. Permittee shall install and properly maintain in the reservoir a staff gage, satisfactory to the watermaster and the SWRCB, for the purpose of determining water levels in the reservoir. Permittee shall record the staff gage readings on October 1 of each year and April 30 of the succeeding year, or such other period as may be specified with written notice to the permittee by the watermaster.

(4) Permittee shall maintain a device, satisfactory to the SWRCB, which is capable of measuring water directly diverted under this permit. A satisfactory device includes: For Pumping Stations: (1) In-line flow meter having instantaneous and total flow reading capability, or (2) Proof of a pump test performed within the last 5 years together with official monthly power consumption records for the electric meter serving the pump. For Gravity Diversions: A weir, flume, or other flow measuring device that is properly installed, or a flow-rating curve established by volumetric measurements. Permittee shall maintain monthly records of direct diversion from March 1 to July 15 of each year, or such other period as may be specified with written notice to the permittee by the watermaster.

(5) Permittee shall report to the watermaster annually, all diversions under this permit by September 1 of each year on forms approved by the watermaster.

(6) Permittee shall allow the watermaster reasonable access to the project covered by this permit to inspect measuring equipment and to observe compliance with these permit terms and conditions, upon 48-hour prior notice and upon such reasonable conditions as permittee may prescribe.

(7) Permittee is hereby put on notice that there may be years when diversion of water under this permit will not be within the reservation of water established for the Putah Creek watershed upstream of Monticello Dam, as set forth in the Agreement and that in those years no water may be available under this permit, and that releases of stored water may be required.

(8) Permittee is hereby put on notice that the waiver of priority granted by Reclamation and Solano County Water Agency provides that in the event Allowable Depletion is exceeded in any year, water diverted to storage that year shall be released and/or direct diversions shall be curtailed during the ensuing season(s), when applicable, to the extent necessary to bring the Allowable Depletion into compliance, in the following order:

- a. All amounts directly diverted and/or diverted to storage by holders of Post-Reservation Water Rights in excess of 120 percent of that water right holder's previous five-year average, in reverse order of water right priority.

b. All amounts directly diverted and/or diverted to storage by holders of Post-Reservation Water Rights above the previous five-year average diversion, in reverse order of priority.

c. All remaining water directly diverted and/or diverted to storage that year by holders of Post-Reservation Water Rights in reverse order of priority.

(9) In any year in which Annual Depletion exceeds Allowable Depletion, if Lake Berryessa: (1) does not drop below 640,000 acre-feet in storage as of May 1, permittee shall have three years, starting in the next Accumulation Season, to make up or repay permittee's excess diversions; or (2) does not reach 640,000 acre-feet of storage as of May 1, permittee shall have one year, starting in the next Accumulation Season, to make up or repay permittee's excess diversions. In the event that Lake Berryessa spills at any time prior to full payback of excess depletion, permittee shall be excused from any further obligation for repayment of the overage.

(10) Permittee shall provide watermaster prior notice of any repayment. Repayment may be made either by releases from storage, curtailment of direct diversion, or by the provision of water from other sources.

(11) Permittee shall notify the watermaster of any change in ownership of land, changes in the water right, or changes in address related to the permit.

(12) Permittee is hereby put on notice of permittee's right, upon reasonable prior notice, to inspect and to copy, at permittee's own expense, all records and reports of the watermaster.

(13) Solely for purposes of administering Post-Reservation Depletion, the average annual depletion assigned to this project is ____ acre-feet per annum as calculated by the watermaster using information described in Exhibit C of the Condition 12 Settlement Agreement. Permittee shall notify the watermaster of any change in crop type, acreage irrigated, and irrigation method. Any change in water usage which results in an increase in average annual depletion of more than 10 percent for non-weather related reasons, as determined by the watermaster, will require filing a new water right application.

(Agreement pp. 13-15, Exhibit E)

Inclusion in the permit of certain provisions of this Agreement shall not be construed as disapproval of other provisions of the Agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.

(0000024)

The State Water Resources Control Board (SWRCB) shall have continuing authority under article X, section 2 of the California Constitution, Water Code Sections 100 and 275, and the common law public trust doctrine over this permit to delete, revise, amend, or adopt new terms or conditions to: (1) implement the March 10, 1995, Condition 12 Settlement Agreement and

any amendments to the agreement and (2) make the terms or conditions consistent with any order of the superior court. No action shall be taken pursuant to this paragraph unless the SWRCB provides notice to affected parties and provides an opportunity for a hearing.

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Permit Term 211 (Term D) Special Navarro River Terms

When Used: For projects on the Navarro River (Terms A through D).

Term D: *Term D:* Permittee shall install and maintain measuring devices, satisfactory to the Chief, Division of Water Rights, which are capable of measuring the instantaneous rate of diversion and the cumulative quantity of water diverted under this permit. A record of daily measurements shall be maintained by the Permittee, including readings at the beginning and end of the diversion season. A copy of the measurement records shall be submitted to the Chief, Division of Water Rights, no later than 30 days after the end of each diversion season.

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Permit Term B Purchase from Nevada Irrigation District

When Used: Permits for storage on sources which could affect Nevada Irrigation District's water. (Also include standard permit terms 43 or 44 as appropriate).

Term: No water shall be diverted under this permit until permittee has installed devices, satisfactory to the State Water Resources Control Board, which are capable of measuring the flow into and out of permittee's reservoir during the nonstorage season unless water is purchased from the Nevada Irrigation District to offset seepage and evaporation losses at the reservoir. Said devices shall be properly maintained.

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Terms Directly Requiring Measurement (Underground Storage and Recovery)

Permit Term 117 Measuring Devices – Underground Storage

When Used: All permits for underground storage.

Term: Prior to diversion of water under this permit, permittee shall (1) install devices to measure the quantities of water placed into underground storage and (2) install devices to measure or provide documentation of the method to be used to determine the quantity of water recovered from underground storage and placed to beneficial use. All measuring devices and the method of determining the quantity of water recovered from underground storage shall be approved by the State Water Resources Control Board prior to diversion of water under this permit. All measuring devices shall be properly maintained.

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Terms Directly Requiring Measurement (Levels/Staff Gages)**Permit Term 47 Measuring Devices – Reservoir Staff Gage(s)**

When Used: with Term 51 or other reservoir release requirements.

Term: Permittee shall install and properly maintain staff gage(s) in the reservoir(s), satisfactory to the State Water Resources Control Board, for the purpose of determining water levels in the reservoir(s).

Permittee shall record the staff gage readings on or about _____ * _____ of each year. Such readings shall be supplied to the State Water Resources Control Board with the next progress report submitted to the Board by permittee.**

The State Water Resources Control Board may require the release of water that cannot be verified as having been collected to storage prior to October 1 of each year.

Permittee shall allow (name of protestant) and all successors in interest, or a designated representative, reasonable access to the reservoir(s) for the purpose of verifying staff gage readings *** and determining water levels in the reservoir(s).

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* October 1, _____ date _____ and _____ date _____, or other date(s).

** Substitute specific dates for submitting the readings and/or add other parties to receive the readings as necessary.

*** Include only if verification of readings is required.

Permit Term D1 Tributaries to Clear Lake – Agreement

When Used: Storage projects when permittee has entered into the standard contract for purchase of water from Yolo County Flood Control and Water Conservation District.

Term: Permittee shall comply with the following provisions which are derived from the contract between _____ and Yolo County Flood Control and Water Conservation District executed on _____ and filed with the State Water Resources Control Board:

- (1) If during the period from September 1 of any year through April 30 of the succeeding year, either (a) the elevation of Clear Lake has reached 7.56 feet as measured on the Rumsey Gage or (b) water has been discharged from Clear Lake to hold the water level down in compliance with the Gopcevic Decree, water collected to storage during permittee's corresponding diversion season shall be water appropriated under this permit. If during such period from September 1 through April 30, either (a) or (b) above does not occur, water

collected in permittee's reservoir(s) shall be purchased from the Yolo County Flood Control and Water Conservation District.

(2) Permittee shall install and maintain in the reservoir(s) an accurate direct reading staff gage, calibrated to storage in acre-feet, which is referenced to a permanent benchmark. Permittee shall supply the staff gage reading on or about October 1 of each year to the Yolo County Flood Control and Water Conservation District and to the State Water Resources Control Board with permittee's report of annual water use.

(3) Permittee shall allow a designated representative of the Yolo County Flood Control and Water Conservation District reasonable access to the reservoir(s) for the purpose of determining water levels.

Inclusion in this permit of certain provisions of the referenced contract shall not be construed as disapproval of other provisions of the contract or as affecting the enforceability, as between the parties, of such other provisions insofar as they are inconsistent with the terms of this permit.

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Note: If standard permit term 47 is to be included in the permit for other purposes, modify term 47 as in (2) and (3) above and delete those paragraphs from this term.

Terms Directly Requiring Measurement (Bypass Flows)

Permit Term 60 Reservoir Stream Flow Bypass for Fish and Wildlife

When Used: After agreement between applicant and Department of Fish & Game or if being imposed by the Board.

Term: For the protection of fish and wildlife, permittee shall during the period:

- a. from ____ through ____ bypass a minimum of __ cubic feet per second,*
- b. from ____ through ____ bypass a minimum of __ cubic feet per second,*
- c. from ____ through ____ bypass a minimum of __ cubic feet per second.*

The total streamflow shall be bypassed whenever it is less than the designated amount.

The permittee shall submit a compliance plan, satisfactory to the Chief of the Division of Water Rights, which describes how the bypass flows required by the conditions of this permit will be measured and maintained.

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* When appropriate, express in gallons per minute.

Permit Term 61 Fish and Wildlife Bypass – Napa River

When Used: All Napa River permits upstream from the City of Napa.

Term: For the protection of fish and wildlife, permittee shall during the period:

This information has not been confirmed by CALFED advisory and decision-making bodies. It is intended solely to foster informal stakeholder discussions and elicit preliminary feedback. Anyone using this information beyond the Staff Work Group is asked to appropriately characterize the nature of this material.

- a. from June 1 through October 31 bypass a minimum of 3.0 cubic feet per second,
- b. from November 1 through November 14 bypass a minimum of 1.0 cubic foot per second,
- c. from November 15 through February 29 bypass a minimum of 15.0 cubic feet per second and,
- d. from March 1 through May 31 bypass a minimum of 10.0 cubic feet per second.

The total streamflow shall be bypassed whenever it is less than the designated amount. Streamflows shall be as measured at the nearest USGS Gaging Station on the Napa River or by a device acceptable to the State Water Resources Control Board at alternative locations which may be designated by the watermaster administering the water distribution program.

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- * 3.0 cfs between Napa and Rutherford
1.0 cfs upstream from Rutherford

Permit Term 62A Measuring Device for Bypass Single – Project not Built
When Used: If bypass of water is required.

Term: No water shall be diverted under this permit until permittee has installed a device, satisfactory to the State Water Resources Control Board, which is capable of measuring the bypass flow required by the conditions of this permit. Said measuring device shall be properly maintained.

(0060062A)

Note - This term should not be used for the Russian River or other locations where permanent streamflow gages are reasonably near the point of diversion.

Permit Term 62AP Measuring Devices for Bypass – Multiple Project not Built
When Used: If bypass of water is required.

Term: No water shall be diverted under this permit until permittee has installed devices, satisfactory to the State Water Resources Control Board, which is capable of measuring the bypass flows required by the conditions of this permit. Said measuring devices shall be properly maintained.

(0060062AP)

Note - This term should not be used for the Russian River or other locations where permanent streamflow gages are reasonably near the point of diversion.

Permit Term 62B Measuring Device for Bypass – Single, Project Built
When Used: If bypass of water is required.

Term: Permittee shall install a device, satisfactory to the State Water Resources Control Board, which is capable of measuring the bypass flows required by the conditions of this permit. Said measuring device shall be properly maintained.

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Note - This term should not be used for the Russian River or other locations where permanent streamflow gages are reasonably near the point of diversion.

Permit Term 62BP Measuring Device for Bypass – Multiple, Project Built

When Used: If bypass of water is required.

Term: Permittee shall install devices, satisfactory to the State Water Resources Control Board, which is capable of measuring the bypass flows required by the conditions of this permit. Said measuring devices shall be properly maintained.

(0060062BP

Note - This term should not be used for the Russian River or other locations where permanent streamflow gages are reasonably near the point of diversion.

Permit Term 70 Flow Bypass Compliance Plan

When Used: For projects with flow bypass permit terms.

Term: *Within six months of the issuance of this permit, the permittee shall submit a Compliance Plan for approval by the chief of the division of water rights that will demonstrate compliance with the flow bypass terms specified in this permit. The compliance plan shall include the following:*

A description of the physical facilities (i.e., outlet pipes, siphons, pipelines, bypass ditches, splitter boxes etc.) that will be constructed or have been constructed at the project site and will be used to bypass flow.

A description of the gages and monitoring devices that will be installed or have been installed to measure stream flow and/or reservoir storage capacity.

A time schedule for the installation of these facilities.

A description of the frequency of data collection and the methods for recording bypass flows and storage levels.

An operation and maintenance plan that will be used to maintain all facilities in good condition.

The Permittee shall be responsible for all costs associated with developing the Compliance Plan, and installing and maintaining all flow bypass and monitoring facilities described in the Compliance Plan.

The monitoring data shall be maintained by the permittee for ten years from the date of collection and made available to the Chief of the Division of Water Rights, upon request. Any

non-compliance with the terms of the permit shall be reported by the permittee promptly to the Chief of the Division of Water Rights

Diversion and use of water prior to approval of the Compliance Plan and the installation of facilities specified in the Compliance Plan is not authorized.

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Permit Term 200

Fish & Wildlife Protection Bypass Term

When Used: Whenever a bypass term is needed for fish and wildlife protection and there is no special term for a stream system. Choose the most appropriate version to customize for each stream. Whenever possible, a passive bypass structure is usually preferable to a streamflow measuring device.

Term: a) For the protection of fishery resources, Permittee shall bypass a minimum of sixty percent (60%) of the average annual runoff of **stream name**¹⁶⁵, or **amount** cubic feet per second. The total streamflow shall be bypassed whenever it is less than the designated rate.

or

b) For the protection of fisheries, wildlife, and other instream (and public trust) uses in the **stream name**, diversions under this permit shall be subject to maintenance of minimum bypass flows in **stream name**:

1. From **date to date**, **amount** cubic feet per second;
2. From **date to date**, **amount** cubic feet per second;
3. From **date to date**, **amount** cubic feet per second; *as measured?* for as many periods as necessary.

To be used with either a) or b) above: No diversion shall take place under this permit if the flow in **stream name** is, or would be reduced by such diversion, below the designated rates. To ensure compliance with this condition, by **date** of each year Permittee shall file a report with the Chief, Division of Water Rights, containing the following information:

- a. Dates during the previous period of **date to date** when water was diverted under this permit; and
- b. Flows measured in **stream name** under this permit during the same period.

a) No water shall be diverted under this permit until the Permittee has installed a structure in **stream name**, satisfactory to the State Water Resources Control Board, which is capable of passively bypassing the flow(s) required by the conditions of this permit. Permittee shall submit plans and specifications of the bypass structure to the Chief of the Division of Water Rights, within six-months of the date the permit is issued. The plans for bypass structure shall be reviewed and must be satisfactory to the Chief, Division of Water Rights, before any construction is undertaken. Permittee shall furnish evidence which substantiates that the bypass structure has been installed, within sixty (60) days from the date of approval of the water right permit. If the bypass structure is rendered inoperative for any reason, all diversions shall cease

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until such time as it is restored to service. Said bypass structure shall be properly calibrated, operated, and maintained by the Permittee (or successors-in-interest) as long as any water is being diverted under any permit or license issued pursuant to Application **NUMBER**.

or

b) No water shall be diverted under this permit until the Permittee has installed a device in **stream name**, satisfactory to the State Water Resources Control Board, which is capable of measuring the bypass flow(s) required by the conditions of this permit. Permittee shall submit plans and specifications of the streamflow measuring device to the Chief of the Division of Water Rights, within six-months of the date the permit is issued. The device and the location of the monitoring station shall be reviewed and must be satisfactory to the Chief, Division of Water Rights, before any construction is undertaken. Permittee shall furnish evidence which substantiates that the streamflow measuring device has been installed, within sixty (60) days from the date of approval of the water right permit. If the measuring device is rendered inoperative for any reason, all diversions shall cease until such time as the device is restored to service. Said measuring device shall be properly calibrated, operated, and maintained by the Permittee (or successors-in-interest) as long as any water is being diverted under any permit or license issued pursuant to Application **NUMBER**.

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Permit Term 201

Pulse Flow Bypass Term for Coastal Streams

When Used: For streams in the coastal mountain range with westerly drainage- to the Pacific Ocean if there is no special term for the stream system and for use with Term 60.

Term: For the protection of anadromous fish attraction and migration in coastal streams, Permittee shall, during the diversion period from **months** be subject to maintenance of minimum bypass flows in **stream name**; except that the entire flow shall be bypassed for **number of** consecutive days after a Pacific storm causes streamflow in stream **name** to rise above **amount** cubic feet per second. Pulse flows shall be measured at **location**.

or

For the preservation of pulse flows, necessary for upstream migration of fish and gravel recruitment, the maximum rate of direct diversion or diversion to offstream storage shall not exceed **number** percent (%) of the average annual unimpaired flow of the **stream name**, or **amount** cubic feet per second.

To ensure compliance with this condition, by **date** of each year Permittee shall file a report with the Chief, Division of Water Rights, containing the following information:

- a. Dates during the previous period of **date** to **date** when water was bypassed under this permit; and
- b. Flows measured at **location** in **stream name** under this permit during the same period.

a) No water shall be diverted under this permit until the Permittee has installed a structure in **stream name**, satisfactory to the State Water Resources Control Board, which is capable of passively bypassing the flow(s) required by the conditions of this permit. Permittee shall submit plans and specifications of the bypass structure to the Chief, Division of Water Rights, within

six-months of the date the permit is issued. The plans for bypass structure shall be reviewed and must be satisfactory to the Chief, Division of Water Rights, before any construction is undertaken. Permittee shall furnish evidence which substantiates that the bypass structure has been installed, within sixty (60) days from the date of approval of the water right permit. If the bypass structure is rendered inoperative for any reason, all diversions shall cease until such time as it is restored to service. Said bypass structure shall be properly calibrated, operated, and maintained by the Permittee (or successors-in-interest) as long as any water is being diverted under any permit or license issued pursuant to Application **NUMBER**.

or

b) No water shall be diverted under this permit until the Permittee has installed a device in **stream name**, satisfactory to the State Water Resources Control Board, which is capable of measuring the bypass flow(s) required by the conditions of this permit. Permittee shall submit plans and specifications of the streamflow measuring device to the Chief, Division of Water Rights, within six-months of the date the permit is issued. The device and the location of the monitoring station shall be reviewed and must be satisfactory to the Chief, Division of Water Rights, before any construction is undertaken. Permittee shall furnish evidence which substantiates that the streamflow measuring device has been installed, within sixty (60) days from the date of approval of the water right permit. If the measuring device is rendered inoperative for any reason, all diversions shall cease until such time as the device is restored to service. Said measuring device shall be properly calibrated, operated, and maintained by the Permittee (or successors-in-interest) as long as any water is being diverted under any permit or license issued pursuant to Application **NUMBER**.

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Permit Term 204

Responsibility for Measuring Device for Bypass (if using a USGS-or DWR-Operated Gage)

When Used: For all applications that have bypass specifications at stream gages operated by the USGS or Department of Water Resources.

Term: For the protection of fish and wildlife and instream uses, Permittee shall bypass the total streamflow, at all points of diversion, whenever the flow in the **stream name** is less than **amount** cubic feet per second as measured at the **name of gage on the stream name**, California. In the event that said gage is no longer available for streamflow measurements, Permittee (or successors-in-interest) is responsible for installing and maintaining an equivalent gage, satisfactory to the Chief, Division of Water Rights, as near as practicable to the present location of **name of gage**. In the absence of such an equivalent gage, all diversions must cease. These requirements shall remain in force as long as water is being diverted by Permittee (or successors-in-interest) under any permit or license issued pursuant to Application **NUMBER**.

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Permit Term 211 (Term A)

Special Navarro River Terms

When Used: For projects on the Navarro River (Terms A through D).

Term A: For the protection of fish and wildlife and instream uses, Permittee shall bypass the total streamflow, at all points of diversion, whenever the flow in the **stream name** is less than **amount** cubic feet per second as measured at the **gage** on the **stream name**, California. In the event that said gage is no longer available for streamflow measurements, Permittee is responsible for installing and maintaining an equivalent type gage, satisfactory to the Chief, Division of Water Rights, as near as practicable to the present location of **name of gage**.

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Permit Term G Fish Bypass on Lower Pescadero Creek or Butano Creek (San Mateo County)

When Used: Permits on Lower Pescadero Creek or Butano Creek.

Term: The State Water Resources Control Board reserves jurisdiction over this permit to change the fish bypass amounts to conform to the results of a comprehensive field study to be completed by the California Department of Fish and Game to determine minimum streamflow required to protect fishlife. Action to change the bypass amounts will be taken only after notice to interested parties and opportunity for hearing.

No water shall be diverted under this permit until permittee has installed a device, satisfactory to the State Water Resource Control Board, which is capable of measuring the flows required by the conditions of this permit. Said measuring device shall be proper maintained. As an alternative, a single measuring device installed and maintained jointly by all water users on Lower Pescadero Creek (or Butano Creek*), located at a position on the creek acceptable to the Department of Fish and Game and the State Water Resources Control Board, may be substituted.

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*Use only for permits on Butano Creek.

Terms Reserving/Identifying General Authority to Impose a Variety of Requirements

Permit Term 12 Continuing Authority

When Used: All permits.

Term: Pursuant to California Water code sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting

diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the Board also may be exercised by imposing further limitations on the diversion and use of water by the permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution article X, section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public interest.

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Forms

Statement of Water Diversion and Use

First Notice Groundwater Diversion